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Revitalizing Auto Communities Environmental Response (RACER) Trust

Resource Conservation and Recovery Act Facility Investigation (RFI)

Supplemental Phase 2 Activities Summary Report

Plants 2, 3, & 6, Industrial Land
Lansing, Michigan

February 26, 2014

ARCADIS

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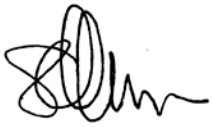

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Resource Conservation and Recovery Act Facility Investigation (RFI), Supplemental Phase 2 Activities Summary Report

Plants 2, 3, & 6, Industrial Land
Lansing, Michigan

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Table of Contents

Executive Summary **1**

Findings and Conclusions 1

Path Forward 5

1. Introduction **7**

1.1 Site Location and Description 10

1.2 Summary of Hydrogeologic Setting 10

2. Summary of RFI Supplemental Phase 2 Activities **12**

2.1 Investigation of Lower 1,4-Dioxane Plume in Groundwater 12

2.1.1 Summary of Activities Completed 13

2.1.2 Horizontal and Vertical Extent of Lower 1,4-dioxane Plume 16

2.1.2.1 Other Constituents of Concern - VOCs 17

2.1.2.2 Other Constituents of Concern - Metals 20

2.1.3 Hydrogeology of Lower 1,4-Dioxane Plume 20

2.1.4 Hydraulic Conductivity and Groundwater Velocity 23

2.1.5 Hydraulic Communication with Municipal Wells 24

2.2 Metals 26

2.2.1 Northern Plant 3 - Historical Arsenic in Soil 27

2.2.2 Plant 3, Area 16 - Extent of metals in soil/groundwater 27

2.2.2.1 Soil Results 28

2.2.2.2 Groundwater Results 28

2.2.3 Plant 6, Area 7 – Offsite Metals 29

2.2.4 Plant 6, Area 5-8 - Metals in Perched Water 30

2.2.5 Plant 6 Bedrock Well Replacement 31

2.3 Utility Corridor Assessment 32

2.4 Storm Sewer Sampling / GSI Assessment 33

2.4.1 Summary of 2013 Storm Sewer Sampling 34

2.4.2 Summary of Storm Water Dilution Calculation 35

2.5 Vinyl Chloride Source Assessment – Bedrock/Deep Overburden on Plant 3 36

2.5.1 Municipal Water Well Sampling 38

3. Summary/Conclusions 40

3.1 Path Forward 45

4. References 47

Tables

Table 1 Summary of Project Correspondence and Submittals

Table 2 Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results

Table 3 Summary of Groundwater Monitoring Well Sample Analytical Results

Table 4 Summary of Deep Aquifer Groundwater Elevation Measurements, December 2013

Table 5 Summary of Vertical Gradient Calculations for Deep Aquifer, December 2013

Table 6 Summary of Slug Test Hydraulic Conductivity Results

Table 7 Summary of Specific Capacity Testing Results in Deep Wells

Table 8 Comparison of Specific Capacity and Slug Testing Hydraulic Testing Results

Table 9 Summary of Soil Sampling Analytical Results

Table 10 Summary of Storm Sewer Groundwater Sampling Results

Figures

Figure 1 Site Location

Figure 2 Summary of 2013 Activities – Plants 2 & 6

Figure 3 Summary of 2013 Activities – Plant 3

Figure 4 Lower 1,4 Dioxane Source Area Cross Section A-A'

Figure 5 Lower 1,4 Dioxane Max ISO Concentration Map

Figure 6 Lower 1,4 Dioxane Plume – Plant 3

Figure 7 Lower 1,4 Dioxane Plume – Plants 2 & 6

Figure 8 Lower 1,4 Dioxane Plume Cross Section B-B'

Figure 9 Groundwater Elevation Deep Overburden December 18, 2013

Figure 10 Weathered Bedrock Groundwater Elevation December 18, 2013

Figure 11 Bedrock Groundwater Effective Head December 18, 2013

Figure 12 Arsenic In Soil Verification Sampling – Plant 3

Figure 13 Metals In Soil And Groundwater – Plant 3, Area 16

Figure 14 Offsite Metals in Groundwater, Areas 7 & 5-8

Figure 15 Bedrock Replacement Wells – Plant 6

Figure 16 Utility Corridor Sample Locations – Plant 2

Figure 17 Utility Corridor Sample Locations – Plant 3

Figure 18 Utility Corridor Sample Locations – Plant 6

Figure 19 Plant 2 Storm Sewers and Sampling Locations

Figure 20 Plant 3 Storm Sewers and Sampling Locations

Figure 21 Plant 6 Storm Sewers and Sampling Locations

Figure 22 Flow Measurement Locations – Plant 6 & Grand River

Figure 23 Vinyl Chloride Investigation – Plant 3

Appendices

Appendix A RFI Summary Matrix

Appendix B Soil Boring Logs (on disc)

Appendix C Laboratory Analytical Reports (on disc)

Appendix D Assessment of Other VOCs Coincident with Lower 1,4-Dioxane Plume

Appendix E Slug Test Model Output (on disc)

Appendix F Background Water Level Study

Appendix G Stormwater Dilution Assessment

Appendix H BWL #10-10 Electrical Conductivity Log

Acronyms and Abbreviations

AOI	Area of Interest
ARCADIS	ARCADIS of Michigan, LLC
BTEX	benzene, toluene, ethylbenzene, and xylenes
BWL	Board of Water and Light
COC	constituent of concern
CMS	Corrective Measures Study
CVOC	chlorinated volatile organic compounds
DC Criteria	Direct Contact Criteria
DEHP	bis(2-Ethylhexyl)phthalate
DW Criteria	Drinking Water Criteria
DWP Criteria	Drinking Water Protection Criteria
ft bgs	feet below ground surface
ft msl	feet above mean sea level
ft/day	feet per day
ft^2/day	square feet per day
ft/ft	foot per foot
ft/yr	feet per year
GM	General Motors
GSI Criteria	Groundwater-Surface Water Interface Criteria
GSIP Criteria	Groundwater-Surface Water Interface Protection Criteria
K	hydraulic conductivity
LNAPL	light nonaqueous-phase liquid
MDEQ	Michigan Department of Environmental Quality
mg/Kg	milligrams per kilogram
mg/L	milligrams per liter
µg/Kg	micrograms per kilogram
µg/L	micrograms per liter

PCBs	polychlorinated biphenyls
PFMs	Passive Flux Meters
RACER	Revitalizing Auto Communities Environmental Response
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SBG	Statewide Default Background
Site	RACER Trust Lansing Plants 2, 3, and 6
SVOCs	semivolatile organic compounds
TAL	Target Analyte List
TCL	Target Compound List
USEPA	U.S. Environmental Protection Agency
VAP	vertical aquifer profile
VOC	volatile organic compound

Executive Summary

This Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Supplemental Phase 2 Activities Summary Report has been prepared on behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust and summarizes the additional RFI activities completed at the Lansing Plants 2, 3, and 6 located in Lansing, Michigan (the Site). The supplemental RFI activities were completed following the submittal of the *Resource Conservation and Recovery Act Facility Investigation Phase 2 Activities Summary Report* (RFI Phase 2 Report; ARCADIS of Michigan, LLC [ARCADIS] 2013a) to the Michigan Department of Environmental Quality (MDEQ), dated April 4, 2013. The RFI Phase 2 Report outlined several data gaps that required additional investigation before the RFI could be considered complete.

Additional fieldwork to address these data gaps was completed between March and December 2013. Based on the additional soil and groundwater data collected at the Site, the relevant exposure pathways identified as part of the Exposure Pathway Analysis (RFI Phase 2 Report) remain valid. This report has been prepared as an addendum to the RFI Phase 2 Report and is not intended as a standalone submittal.

Findings and Conclusions

The RFI to date has adequately characterized the nature and extent of impacts and risk associated with the Site. The data collected allows for the completion of the Final CMS pending the additional transport evaluations and monitoring of the lower 1,4-dioxane plume. The following describes each of the data gaps outlined as part of the RFI Phase 2 Report, provides a brief overview of the scope of work completed, and offers conclusions based on the results of the 2013 RFI supplemental activities:

<u>Lower 1,4-Dioxane:</u>

Plant 3, Deep Overburden (Area 11): At the end of the Phase 2 investigation, the constituent of concern (COC) 1,4-dioxane was detected at deep overburden, greater than 65 feet below ground surface (ft bgs) at concentrations above the current Drinking Water (DW) Criteria. Additional work was completed to characterize and define the extent of lower 1,4-dioxane impacts. The scope of work included 41 deep vertical aquifer profile borings, installation of 24 deep monitoring wells, collection of groundwater samples from new and existing wells in the area of impact, sampling of two nearby municipal wells for 1,4-dioxane, and hydraulic testing of the deep

overburden and bedrock wells installed along the defined 1,4-dioxane plume. Review of the lower 1,4-dioxane investigation results indicates the following:

- Delineation of the lower 1,4-dioxane plume is complete as the lower 1,4-dioxane plume is defined horizontally and vertically. The source area for the lower 1,4-dioxane plume is located beneath the "coliseum" on the southwestern portion of Plant 3. The lower 1,4-dioxane plume is approximately 2,400 feet long and migrates from the coliseum to the south-southwest within the deep overburden and weathered bedrock zones at depths typically between 65 to 75 ft bgs. Bedrock wells both along the axis of the plume and within the surrounding area indicate 1,4-dioxane has not migrated into the underlying bedrock. The morphology and concentration of 1,4-dioxane along the axis of the plume suggest the plume may still be migrating to the south. Additional transport evaluations and monitoring will be completed to support the June 2014 Corrective Measures Study (CMS) submittal.

- Benzene and acetone exceed DW Criteria at locations generally coincident with the lower 1,4-dioxane plume. Benzene and acetone within the weathered bedrock are defined to DW Criteria except for benzene to the east near Saginaw Avenue at Monitoring Well MW-13-49. Confirmatory sampling results are pending; if results are below criteria, no additional investigation is warranted. If results exceed criteria, a step out monitoring well location will be considered east of this location. Because the benzene and acetone impacts are co-located with the 1,4-dioxane, the CMS strategy for mitigation of 1,4-dioxane will also address benzene and acetone.

Metals:

There are several areas at the Site where metals in perched water marginally exceed the Groundwater Surface Water Interface (GSI) and/or DW Criteria near to the property boundary. Even though there are exceedances of criteria, these results do not suggest there is concern under current conditions. Perched groundwater in these locations is not used as a drinking water resource and unlikely to be used for drinking water in the future. Existing or potential off-site exceedances for metals will be addressed as part of the CMS.

- Northern Plant 3 (Areas 14, 17, and 18): Arsenic was detected in soil at the eastern and western Plant 3 property boundaries in historical soil samples at concentrations above the current Part 201 Drinking Water Protection (DWP)

Criteria. Additional work included four soil borings advanced adjacent to historical borings to verify the extent of arsenic in soil. Soil borings completed as part of the supplemental activities indicate all samples were below criteria for arsenic. Arsenic in soil is therefore defined at the property boundary.

- Plant 3, Area 16: Additional work was completed in this area to define metals in soil and groundwater. The scope of work included two soil borings near the property boundary, installation of three monitoring wells and collection of groundwater samples for metals and other site COCs.

    - Additional soil samples collected at the eastern property boundary indicated several metals still exceed criteria; however, the adjacent property is a 200 ft wide rail yard easement and the owner has refused to allow access for additional sampling.

    - Groundwater samples collected in November 2013 from monitoring well MW-13-32 at the eastern property boundary indicate manganese and nickel exceed DW Criteria. Lead exceeded DW Criteria during the August 2013 sampling event and appears to be associated with turbidity.

- Plant 6, Area 7: The extent of metals in groundwater south of Area 7 was not defined to Part 201 Criteria. An additional off-site monitoring well was installed south of the Site and additional groundwater samples were collected from the new well and the existing wells. Vanadium has been detected off-site at concentrations of 0.008 and 0.005 mg/L, slightly above the DW Criteria of 0.0045 mg/L, and arsenic has been detected off-site at a concentration of 0.015 mg/L, slightly above the DW Criteria of 0.010 mg/L.

- Plant 6, Area 5-8: Vanadium in groundwater exceeds DW Criteria at a well located 200 feet from the eastern property boundary. An additional monitoring well was installed between the well and the Plant 6 property boundary to delineate vanadium in groundwater. Sampling of the new monitoring well indicates vanadium at a concentration of 0.005 mg/L, slightly above the DW Criteria of 0.0045 mg/L.

- Plant 6, Bedrock Metals: Metals above DW Criteria have been detected at Plant 6 in historical bedrock wells MW-04-06 and MW-04-04. Well MW-04-06 has also historically indicated vinyl chloride at a concentration of 2 µg/L. In the RFI Phase 2 Report it was postulated that impacts within these wells could be related to well

construction. Both wells were abandoned and replaced in 2013. Follow-up sampling indicates arsenic in both wells at a concentration of 0.021 mg/L, in excess of the DW Criterion of 0.010 mg/L. Vinyl chloride has not been detected in the replacement well MW-04-06R.

Storm sewers/utility corridors:

- Additional Utility Corridor Sampling: At the request of the MDEQ, nine additional soil borings were completed in 2013 adjacent to selected large utility corridors interior to the Site (storm sewers) to evaluate if utility corridors are potential pathways for preferential migration of site-related COCs in groundwater. Based on the utility corridor assessment sampling results, utility corridors at the Site are not a significant pathway for contaminant migration.

- Storm Sewer Monitoring: Two rounds of storm water sampling were completed prior to the RFI Phase 2 Report. Three additional sampling events were completed as part of the additional assessment activities in 2013. Concentrations of metals and xylenes in storm water in excess of the GSI Criteria were detected at the southern Plant 6 outfall during the January 2013 sampling event. Additional samples collected in 2013 have not indicated GSI exceedances at any of the outfalls to the Grand River.

    - Flow measurements were collected of storm water discharge both at the southern Plant 6 outfall and at the Grand River outfall to verify that dilution will reduce the GSI exceedances detected at the Plant 6 to a concentration below criteria at the Grand River. Based on the resulting conservative dilution factor, the maximum concentrations of selenium and xylenes detected at the Plant 6 outfall would be 4-5X below GSI Criteria at the Grand River.

    - Plant 6 Stormceptor ESC-2: Following removal of LNAPL from the stormceptor ESC-2 in January 2013, periodic inspection of absorbent booms and monitoring of ESC-2 has not indicated additional accumulation of LNAPL or occurrence of LNAPL in upgradient storm sewer structures. The occurrence of LNAPL within ESC-2 is attributed to a one-time release either within the former Plant 6 facility or during demolition activities.

Plant 3 Vinyl Chloride Assessment:

Additional characterization was completed on the northern portion of Plant 3 to verify that vinyl chloride detected in deep nested wells on the northwestern portion of Plant 3 was not related to former Plant 3 activities. The scope of work included installation of three additional bedrock monitoring wells, installation of two deep overburden monitoring wells, and sampling of two municipal water supply wells located adjacent to Plant 3.

- Vinyl chloride was not detected at any of the five newly installed bedrock or deep overburden monitoring wells. These results, combined with previous RFI groundwater data, indicate that vinyl chloride in the deep aquifer on the northwestern portion of Plant 3 is not associated with the Site.

- 1,4-Dioxane was detected in the deep overburden at one of the bedrock well boring locations and subsequently defined laterally and vertically utilizing two additional deep overburden wells and the existing deep overburden and bedrock monitoring well network. Based on the results from these wells, the extent of 1,4-dioxane in this area appears limited.

- Municipal Water Supply Wells: Samples were collected from two municipal water supply wells located adjacent to Plant 3. Vinyl chloride was detected in the two deepest samples collected at BWL #10-10 located northeast of Plant 3. Based on the results of the additional characterization outlined above, the vinyl chloride detected at BWL #10-10 does not appear to be associated with Plant 3. VOCs were not detected in the Lansing Township well located west of Plant 3 (TWP #4).

Path Forward

The RFI to date has adequately characterized the nature and extent of impacts and associated risk at the Site and allows for the completion of the Final CMS pending the additional transport evaluations and monitoring of the lower 1,4-dioxane plume. Based on the results of the RFI ARCADIS recommends to following:

- Confirmatory sampling results for benzene at MW-13-49 are currently pending; if the benzene results are below criteria, no additional investigation is warranted. If results exceed criteria, a step out monitoring well location will be considered.

- Passive Flux Meter (PFM) Study - February-March 2014 - Additional characterization of groundwater velocity and flow direction will be completed at monitoring wells installed within the lower 1,4-dioxane plume.

- Bedrock Transducer Study - March 2014 - Additional characterization of the bedrock water levels will be completed in bedrock well located below and near to the lower 1,4-dioxane plume.

The following submittals will be prepared as recommended in the Draft Corrective Measures Study (Draft CMS, ARCADIS 2013b):

- Groundwater Plume Stability and Geochemical Assessment Memo - April 2014 - This submittal will provide a preliminary assessment of plume stability and a geochemical model summarizing groundwater conditions at the Site.

- Final Corrective Measures Study - June 2014 - A Final CMS will be prepared and submitted to MDEQ for review.

- Revised Interim Groundwater Monitoring Plan - April 2014 - This plan will outline the recommendations for continued groundwater monitoring at the Site. The revised plan will be based on the results of the groundwater monitoring to date, the plume stability and geochemical assessment, and additional data required for the development of a groundwater monitoring program to support corrective measures.

1. Introduction

This Resource Conservation Recovery Act (RCRA) Facility Investigation (RFI) Supplemental Phase 2 Activities Summary Report has been prepared on behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust and summarizes the RFI activities completed at the Lansing Plants 2, 3, and 6 located in Lansing, Michigan (the Site). The location of the Site is shown on Figure 1. The supplemental RFI activities were completed following the submittal of the *Resource Conservation and Recovery Act Facility Investigation Phase 2 Activities Summary Report* (RFI Phase 2 Report; ARCADIS of Michigan, LLC [ARCADIS] 2013a) to the Michigan Department of Environmental Quality (MDEQ), dated April 4, 2013. The RFI Phase 2 Report outlined several data gaps that required additional investigation before the RFI could be considered complete. Additional fieldwork to address these data gaps was completed between March and December 2013. The site layout, along with the areas of investigation referenced below, and sample locations completed as part of the supplemental activities are shown on Figures 2 and 3.

This report has been prepared as an addendum to the RFI Phase 2 Report and is not intended as a standalone submittal. A complete list of major report submittals and key correspondence with the MDEQ is included as Table 1.

In general, constituents of concern (COCs) at the Site were compared to the generic screening criteria established by Part 201 of the Michigan Natural Resources and Environmental Protection Act (Act 451, 1994, as amended). Based on the additional soil and groundwater data collected at the Site, the relevant exposure pathways identified as part of the Exposure Pathway Analysis (RFI Phase 2 Report) remain valid.

All of the data gaps outlined by the RFI Phase 2 Report have been addressed during the supplemental activities. The data gaps outlined within the RFI Phase 2 Report included the following:

<u>Lower 1,4-dioxane:</u>

- Plant 3, Deep Overburden (Area 11): The COC 1,4-dioxane was detected at deep overburden, greater than 65 feet below ground surface (ft bgs) at concentrations above the current Drinking Water (DW) Criteria. Additional work was completed to characterize and define the extent of lower 1,4-dioxane impacts. The scope of work included 41 deep vertical aquifer profile borings, installation of 24 deep monitoring wells, collection of groundwater samples from new and existing wells in

the area of impact, sampling of two nearby municipal wells for 1,4-dioxane, and hydraulic testing of the deep overburden and bedrock wells installed along the defined 1,4-dioxane plume.

Metals:

- Northern Plant 3 (Areas 14, 17, and 18): Arsenic was detected in soil at the eastern and western Plant 3 property boundaries in historical soil samples at concentrations above the current Part 201 Drinking Water Protection (DWP) Criteria. Additional work was completed to define the extent of arsenic in soil at the Plant 3 property boundary. The scope of work included completion of four soil borings adjacent to historical borings with arsenic criteria exceedances. Soil samples at each location were collected at intervals consistent with historical sampling.

- Plant 3, Area 16: The extent of metals (primarily arsenic) in soil and groundwater south and east of Area 16 was not defined to Part 201 Criteria between Area 16 and the Plant 3 property boundary. Additional work was completed in this area to define metals in soil and groundwater, including soil sampling at two soil boring locations near the property boundary, installation of three monitoring wells, and collection of groundwater samples for metals and other site COCs.

- Plant 6, Area 7: The extent of metals including lead, arsenic, and vanadium south of Area 7 was not defined in groundwater to Part 201 Criteria. An additional off-site monitoring well was installed south of the Site and additional groundwater samples were collected from the new well and the existing wells to better define metals exceedances in groundwater.

- Plant 6, Area 5-8: Vanadium in groundwater exceeds the Part 201 DW Criteria at P6-SB-35, located 200 feet from the eastern property boundary. Additional sampling at P6-SB-35 confirmed this exceedance. An additional monitoring well was installed between P6-SB-35 and the Plant 6 property boundary to delineate vanadium in groundwater.

- Plant 6, Bedrock Metals: Metals above DW Criteria have been detected at Plant 6 in historical bedrock wells MW-04-06 (lead) and MW-04-04(4) (arsenic, beryllium, total chromium, cobalt, lead, manganese, nickel, and vanadium). It was postulated that impacts within these wells may be related to well construction. Both wells

were abandoned and replaced to verify if metals were a concern in bedrock at these locations.

Storm sewers/utility corridors:

- Storm Sewer Monitoring: Storm sewer sampling, as outlined in the RFI Phase 2 Report, has indicated groundwater impacts to the storm sewer are minimal and, with one exception (southern Plant 6), indicate that groundwater discharging to storm water does not exceed the Groundwater-Surface Water Interface (GSI) Criteria. Three additional rounds of storm sewer sampling were completed at the Site, and flow measurements were collected at the southern Plant 3 outfall and Grand River to characterize the dilution of the Plant 6 discharge.

- Plant 6 Stormceptor ESC-2: Following the January 2013 cleanout of the stormceptor, monitoring of light nonaqueous-phase liquid (LNAPL) within the stormceptor and upgradient storm structures has not indicated the presence of additional LNAPL. Additional monitoring of the stormceptor was completed during three storm sewer sampling events to verify this condition.

- Additional Utility Corridor Sampling: At the request of the MDEQ, additional sampling was completed adjacent to large utility corridors interior to the Site to evaluate if utility corridors are pathways for preferential migration, both on-site and off-site, of site-related COCs in groundwater. A total of nine soil borings were completed to a depth consistent with the utility invert, and groundwater was collected where encountered.

All of the data gaps outlined within the RFI Phase 2 Report are addressed as part of this Supplemental Report. In addition to the data gaps outlined above, the following work was completed based on discussion with the MDEQ and the Lansing Board of Water and Light (BWL):

- Three additional bedrock monitoring wells and two deep overburden monitoring wells were installed on the northern portion of Plant 3 to verify the RFI conclusion that vinyl chloride detected in bedrock and deep overburden on the northwestern portion of Plant 3 was not emanating from any known Plant 3 VOC source areas. In addition, samples were collected from two municipal water supply wells located adjacent to Plant 3 to determine if groundwater impacts are present in the municipal wells.

The supplemental investigation activities, as well as the results, have been discussed with the MDEQ on a regular basis. MDEQ comments and suggestions were incorporated into the investigation activities whenever possible to help facilitate the RFI review.

1.1 Site Location and Description

The Site (Plants 2, 3, and 6) is located in western Lansing and occupies a total area of approximately 250 acres. The locations of Plants 2, 3, and 6 relative to the greater Lansing area are shown on Figure 1. The construction of the three plants was completed between the early 1900s (Plant 2) and the 1930s (Plant 3), and operations were focused on various aspects of automobile assembly and manufacturing. Plants 2 and 3 are located in Lansing Township and Plant 6 is located within the City of Lansing. The *Current Conditions Report* prepared by ARCADIS (2008) provides a detailed summary of the site history and operations.

Decommissioning of the plants began in 2007. As of the date of this report, the site buildings have been demolished and all three Plants are secured with fencing and locked gates. Concrete slabs and asphalt parking lots remain in place across much of Plants 2 and 3. Demolition activities conducted through 2012 removed much of the concrete slabs at Plant 6 and the crushed concrete was used as fill material across all three plants.

1.2 Summary of Hydrogeologic Setting

The following provides a brief description of the site hydrogeologic setting for reference. Additional details, including cross-sections and output from a three-dimensional model, are available as part of the RFI Phase 2 Report (ARCADIS 2013a).

The Grand River is incised into the regional topography and wraps around the Site to the south, east, and north. Surface elevations for the Site range from approximately 855 to 875 feet above mean sea level (ft msl). The elevation of the Grand River is approximately 830 ft msl and known to lose water to the bedrock aquifer in the Lansing area.

The geology of the Site is complex, consisting of an interbedded series of glacially derived sediments. For discussion purposes, the geology of the Site is divided into six general hydrostratigraphic units (from shallow to deep):

- Shallow fill – Typically 1 to 10 feet thick consisting of sand and gravel mixes brought to the Site as part of construction activities. The shallow fill occasionally contains shallow perched water when present above a clay layer.

- Interbedded zone – Typically interbedded soft clay, glacial tills, and isolated lenses of silt and sand. Sand and silt lenses are typically saturated, forming thin discontinuous zones of perched groundwater. This unit is primarily encountered on Plants 2 and 6 and the southern portion of Plant 3. Saturated soils within the shallow fill and interbedded zone are generally referred to as the "perched water" or collectively as the "perched zone."

- Glacial till – A compact, dense, and mostly dry silt/sand/gravel/clay mix that creates a vertical barrier to groundwater flow and separates the perched water above from the deep aquifer. Occasionally contains layers of saturated sand, especially in the central portion of Plant 6.

- Deep overburden – Consists of a mix of sand layers and sand-silt-clay till located above the bedrock. The deep overburden is dry beneath the glacial till but becomes saturated where encountered deeper than 65 to 70 ft bgs. Saturated deep overburden is only observed at Plant 3 where a southwest-northeast trending bedrock valley dips below the regional water table.

- Weathered bedrock – The transition from glacial overburden to consolidated rock is gradational with a weathered bedrock layer typically ranging from 5 to 20 feet thick. The weathered bedrock zone, especially the weathered sandstone portion, is a preferential pathway for groundwater flow. Weathered bedrock is typically encountered between 60 to 75 ft bgs, except in the bedrock valley located across the northwestern portion of Plant 3, where bedrock can be encountered at depths greater than 100 ft bgs.

- Bedrock – Consists of the Grand River and Saginaw Formations. The Grand River Formation is a fine to medium-grained sandstone that occupies erosional valleys within the Saginaw Formation (United Stated Geological Survey and National Parks Service 2000). Beneath the Site, the Saginaw Formation consists primarily of fine-grained sandstone with thin lenses of shale of varying thickness. More significant layers of shale are encountered within the Saginaw Formation that can be up to 15 feet thick. Groundwater within the deep overburden, weathered bedrock, and bedrock zones are referred to separately, or collectively as the "deep aquifer."

2. Summary of RFI Supplemental Phase 2 Activities

The overall objective of the RFI supplemental activities was to close the data gaps identified by the RFI Phase 2 Report. Appendix A includes an updated version of the RFI "Matrix" table summarizing the results of the RFI for each investigation area identified by the *RFI Work Plan, Phase 2* (ARCADIS 2012a) and includes potential corrective measures for each area proposed as part of the draft Corrective Measures Study (CMS) submitted to the MDEQ in June 2013 (ARCADIS 2013b). The locations of each investigation, as well as the locations of all soil borings and monitoring wells installed as part of the 2013 RFI supplemental activities, are shown on Figures 2 and 3. Soil boring logs for additional soil borings and monitoring wells installed as part of the 2013 supplemental activities are included as Appendix B on the attached disc.

2.1 Investigation of Lower 1,4-Dioxane Plume in Groundwater

One of the primary data gaps identified during the RFI Phase 2 activities was the lateral and vertical extent of 1,4-dioxane in groundwater within the deep overburden at Plant 3. The impact was detected at monitoring well MW-12-21, which was installed at the request of the MDEQ to provide vertical delineation of perched water impacts identified in Area 11. Prior efforts to collect vertical aquifer profile (VAP) samples from the deep overburden at this location using a temporary well assembly were not successful due to the low permeability of the deep overburden at this location (primarily silt). Well MW-12-21 was installed at a depth of 70 to 75 ft bgs. The water in the well is typically turbid during sampling and goes dry at very low pumping rates; however, laboratory results indicate 1,4-dioxane present at concentrations of up to 510 micrograms per liter (µg/L) (June 2013). This result indicates that groundwater impacts have migrated downward at this location from the perched zone, through the vadose zone that separates the perched water from the deep aquifer, to the deep overburden at this location.

Area 11 is located south of the area known as the "coliseum." The coliseum is a subfloor of the former Plant 3 structure that is constructed to a depth of 15 to 20 feet below grade, formerly used to house equipment for stamping automobile parts (buildings 304 and 305 press pit operations). Upon demolition of the Plant 3 building, the subfloor was exposed and is currently an approximately 3-acre, 15- to 20-foot-deep pit that traps surface runoff and precipitation. To prevent excessive ponding, holes were punched through the floor during demolition to allow the coliseum to drain. Based on the depth of the coliseum, the known depth of the glacial till confining layer in the area, and the result of soil borings completed through the floor of the coliseum, the

construction of the subfloor cut away the glacial till confining layer. The result is that this breach in the till allows vertical migration of groundwater impacts from the perched zone to the deep aquifer and also promotes deep aquifer recharge that results in radial groundwater flow away from the area. A cross-section illustrating the geology and groundwater impacts for Area 11 is included as Figure 4. Boring logs (including well construction details) for VAP borings and monitoring wells completed as part of the lower 1,4-dioxane investigation are included in Appendix B (attached disc).

2.1.1 Summary of Activities Completed

Several rounds of investigation were completed to delineate the extent of the 1,4-dioxane beneath and downgradient from the coliseum. The scope of work was completed between March and December 2013 and included: 41 deep vertical aquifer profile borings, installation of 24 deep monitoring wells (20 in deep overburden/weathered bedrock, four in bedrock), collection of groundwater samples from new and existing wells in the area of impact, sampling of two nearby municipal wells for 1,4-dioxane, and hydraulic testing of the deep overburden and bedrock wells installed along the 1,4-dioxane plume.

The following provides a general timeline for the investigation completed during three separate mobilizations. Each successive scope of work was developed with the approval of MDEQ.

March-April 2013

The initial scope of work was outlined in the 2013 Budget Amendment 1 submitted to the MDEQ on February 28, 2013 and approved by the MDEQ on March 1, 2013. The goal of the initial scope was to complete VAP sampling and monitoring well installation to delineate the 1,4-dioxane impacts both vertically and horizontally around the apparent “source area” at MW-12-21. A deeper monitoring well (MW-13-22) was installed adjacent to MW-12-21 to delineate the impacts vertically, and VAP sampling and monitoring wells were completed on an approximately 200-foot grid surrounding MW-12-21 (MW-13-23 through MW-13-26).

At each location, the boring was advanced via sonic drilling methods to the top of bedrock or weathered bedrock zone. Drilling water was not used during drilling to limit issues associated with sample dilution. A temporary well assembly was lowered down the sonic casing and used to collect a groundwater sample at the bedrock interface, and then a permanent monitoring well was set at a shallower depth, generally

consistent with the depth of MW-12-21 (70 to 80 ft bgs). Groundwater samples were submitted to Merit Laboratories in Lansing, Michigan, on a 24-hour turnaround time and the results of each boring were used to help guide the completion of additional borings. Groundwater samples were submitted for analysis of 1,4-dioxane (Method 8260 SIM), as well as volatile organic compounds (VOCs) using U.S. Environmental Protection Agency (USEPA) Method 8260. In addition, groundwater samples collected during this initial phase of work were submitted for analysis of semi volatile organic compounds (SVOCs) utilizing USEPA Method 8270 and metals using USEPA Method 6020.

The initial results of the investigation suggested the 1,4-dioxane impacts extended away from the source area to the east. In addition, the deep monitoring well MW-13-22 (installed adjacent to the MW-12-21 source area well) indicated 1,4-dioxane was present in sand immediately above bedrock (likely weathered sandstone). As a result, a bedrock well was installed in the source area (MW-13-28) and several contingency borings were completed to the east and south of the source area (MW-13-27 through MW-13-30). Sampling of the bedrock well did not indicate 1,4-dioxane above the method detection limit. The contingency wells to the east and south of the source area suggested a groundwater plume extending to the southeast through MW-13-29 (Figure 3).

July-August 2013

The scope of work for the next phase of the investigation was outlined in an email to the MDEQ on May 2, 2013, and subsequently approved by the MDEQ via email on May 13, 2013. Based on the results of the first phase of the investigation, the 200-foot sampling grid was extended to the south and east of the source area toward Saginaw Avenue and Plant 2. The scope of work was modified based on the lessons learned during the first phase; specifically, based on the permeability of the deep overburden (outside of the silty source area) and weathered bedrock zone, VAP sampling was used to delineate the downgradient portion of the 1,4-dioxane plume. Groundwater samples during this phase were submitted for analysis of VOCs and 1,4-dioxane (8260 SIM).

Each boring was advanced via sonic methods to the deep aquifer water table. Drilling water was not used during drilling in order to limit issues associated with sample dilution. If groundwater was encountered within the deep overburden (primarily on Plant 3), a VAP sample was collected before advancing the boring to the weathered bedrock zone. Once a VAP sample was collected from the weathered bedrock, the

boring was abandoned by grouting the boring via tremie line from the bottom up while systematically removing the outer 6-inch sonic casing.

Groundwater samples were submitted to Merit Laboratories on a 24-hour turnaround. The proposed grid was adapted based on the laboratory results. During this phase of the lower 1,4-dioxane investigation, the 1,4-dioxane impacts were tracked to the southeast of the coliseum, across Saginaw Avenue and south on Plant 2 to the transect consisting of borings VAP-P2-MI62, VAP-P2-MH82, and VAP-P2-MI101, at which point the drilling was paused and the data were presented to the MDEQ.

October-November 2013

The third scope of work for the 1,4-dioxane investigation was outlined as part of the 2013 Budget Amendment 3 submitted to the MDEQ on September 1, 2013. Further details regarding the proposed work were provided to the MDEQ via email on September 25, 2013. The scope of work was approved by the MDEQ via email on October 1, 2013 with the caveat that borings advanced through areas of known perched zone impacts (Plant 2) use double-cased drilling methods to limit the potential for cross contamination. The proposed scope of work consisted of additional VAP sampling transects on Plants 2 and 6 and installation of a monitoring network upon delineation of the plume.

Due to the presence of the LNAPL plume and associated perched zone 1,4-dioxane impacts in the shallow fill and interbedded zone located in the central portion of Plant 2, the sampling grid was resumed approximately 600 feet south-southeast of the last transect completed during the second scope of work. As agreed with the MDEQ, sonic borings completed in areas of known perched water impacts were advanced using a double-cased drilling method. A 7-inch casing was advanced to the glacial till confining layer and then the 6-inch casing was advanced out of the 7-inch casing to the final depth of the borehole. This drilling method effectively sealed off the perched water impacts from the deeper portion of the borehole, reducing the chances of cross-contamination. Similar to the previous phases of the investigation, drilling water was not used during drilling. VAP sampling was used to collect groundwater samples from the deep overburden (if encountered) and from the weathered bedrock zone.

Three VAP transects were completed as part of the third scope of work. Beginning south of the LNAPL plume, the first transect identified 1,4-dioxane at boring VAP-P2-OS100 at a concentration of 196 µg/L within the weathered bedrock. Based on this result, a second VAP transect was completed 400 feet downgradient on Plant 6. This

transect did not identify impacts within the weathered bedrock zone. The third transect (VAP borings VAP-P2-PV76, PV101, and PU122) was completed on Plant 2 between the first and second transects to further refine the horizontal delineation and verify the plume was not turning. On the third transect, in addition to samples collected from the weathered bedrock zone, VAP samples were collected from deeper bedrock 15 to 20 feet below the weathered zone to verify the 1,4-dioxane was not migrating vertically into a deeper zone. Although several VOCs, including benzene, toluene, ethylbenzene, xylenes (BTEX), MEK, and acetone, were identified in samples collected from the third transect (discussed further below), 1,4-dioxane was not detected.

Monitoring wells were installed on three transects (southern Plant 3, north-central Plant 2, and western Plant 6) to provide permanent monitoring locations. The Plant 6 wells were placed to provide a downgradient clean monitoring location. Within each monitoring well transect, the central well location includes nested wells consisting of deep overburden (if present, Plant 3 only), weathered bedrock, and bedrock wells.

2.1.2 Horizontal and Vertical Extent of Lower 1,4-dioxane Plume

The horizontal and vertical extents of the lower 1,4-dioxane plume have been defined at the Site. Figure 5 shows the horizontal extent of the 1,4-dioxane based on the maximum concentrations detected at each sampling location. Annotated maps illustrating the distribution of 1,4-dioxane and other VOCs detected during the investigation are provided as Figures 6 and 7, and a cross-section depicting the vertical extent of lower 1,4-dioxane plume is included as Figure 8. Laboratory analytical data for groundwater samples collected during VAP sampling are summarized in Table 2. Groundwater samples collected from monitoring wells are summarized in Table 3. Laboratory analytical reports are provided as Appendix C on the attached disc.

As shown on Figure 5, the extent of 1,4-dioxane associated with the source area at Area 11 extends away from the coliseum to the southeast, across Saginaw Avenue to the south-central portion of Plant 2. The plume has been delineated horizontally by VAP borings and with monitoring wells installed at transects along the plume for long term monitoring purposes. The total length of the plume is approximately 2,400 feet. The concentration of 1,4-dioxane at the source area well (MW-12-21) is approximately 500 µg/L. The highest concentrations of 1,4-dioxane within the downgradient plume appear concentrated within a central core typically 50 to 100 feet wide with detected concentrations typically ranging from 100 to 200 µg/L. The highest concentration along the core was observed at MW-13-43 at 220 µg/L. The southernmost boring where 1,4-dioxane was observed (VAP-P2-OS100) had a concentration of 196 µg/L indicating

that little attenuation has occurred along the length of the plume. The long and thin morphology of the plume, coupled with the lack of 1,4-dioxane attenuation, suggests a relatively rapid plume migration rate. The concentration at the toe of the plume indicates the plume is likely still migrating to the south. The hydraulic testing and groundwater velocity estimates are summarized below in Section 2.1.4.

It is possible that 1,4-dioxane within the perched zone at Plant 2 leaks downward through the glacial till confining layer and contributes to the lower 1,4-dioxane plume. However, based on the distribution of the lower 1,4-dioxane - characterized in detail with VAP borings and monitoring wells as indicated on Figures 6 and 7 - leakage downward from the perched zone would have to occur such that the resulting contributions are exactly coincidental with the mapped lower 1,4-dioxane plume.

To date, 1,4-dioxane was not been detected at any of the five bedrock wells installed along the plume axis (north to south: MW-13-28, MW-13-47, MW-13-44, MW-12-05, and MW-13-50. The extent of 1,4-dioxane is therefore delineated vertically (Figure 8) and does not migrate within consolidated bedrock or currently threaten off-site bedrock municipal water supply wells.

Two municipal wells were sampled as part of the RFI supplemental activities. These included a Lansing Township well (TWP #4) located 500 feet west of the coliseum area, and a BWL well (BWL 10-10) located northeast of Plant 3. Neither well indicated the presence of 1,4-dioxane. Additional detail regarding the municipal well sampling is provided in Section 2.5.1.

2.1.2.1 Other Constituents of Concern - VOCs

As indicated on Figures 6 and 7, several other VOCs are detected sporadically along the lower 1,4-dioxane plume, primarily in samples collected from the weathered bedrock zone. These include BTEX, acetone, and MEK (aka “other VOCs”). The most notable detections for these VOCs were found at VAP borings or monitoring wells located along the northeastern edge of the lower 1,4-dioxane plume (MW-13-49 and VAP-P2-JU88), within the central portion of the plume (VAP-P2-KH71 and VAP-P2-MI101), and at the southern toe of the plume (VAP-P2-OS100, VAP-P2-OS120, and VAP-P2-PV101). Benzene exceeds the DW Criterion (5 µg/L) at several of these locations with concentrations up to 130 µg/L detected at VAP-P2-MI101. Acetone also exceeds DW Criterion (760 µg/L) at two locations with concentrations of 770 µg/L at VAP-P2-MI101, and 1,730 µg/L at VAP-P2-PV101 located at the toe of the lower 1,4-dioxane plume. A map illustrating the distribution of benzene and acetone relative to

the 1,4-dioxane plume is included in Appendix D. With the exception of low concentrations of acetone and toluene, benzene and other VOCs (MEK, ethylbenzene, and xylenes) have not been observed at monitoring wells located around the coliseum source area.

To determine the source of other VOCs within the 1,4-dioxane plume, ARCADIS completed a review of the available site information. Areas of Interest (AOIs) introduced as part of the *Current Conditions Report* (ARCADIS 2008) were reviewed in detail, as were historical aerial photos and Sanborn Fire Insurance maps to determine if there are any potential source areas that were not investigated as part of the RFI activities. An annotated map summarizing the source area review is included in Appendix D. Other than AOIs previously investigated as part of the RFI, the review did not suggest a potential source area for these other VOCs in the vicinity of the lower 1,4-dioxane plume.

In addition to reviewing the historical site use, Appendix D includes maps summarizing all detections of the other VOCs identified within the perched zone during the previous RFI activities. Benzene and acetone are the only other VOCs that exceed criteria in the vicinity of the lower 1,4-dioxane plume. Toluene, ethylbenzene, and xylenes are generally co-located with benzene where encountered. Review of the RFI data indicates the following regarding benzene and acetone:

- Benzene: Benzene was detected in two areas within the perched zone near the lower 1,4-dioxane plume: Plant 2 at Area 2 and Area 5-2. Benzene has not been detected in the perched zone near the coliseum. In Area 2, benzene has been detected in soil at a concentration of up to 15,300 micrograms per kilogram (µg/Kg) at a depth of 17 to 18 ft bgs, and in groundwater at a concentration of up to 840 µg/L at a depth of 10 to 14 ft bgs. In Area 5-2, in the vicinity of the Plant 2 LNAPL plume, benzene has been detected at several locations in groundwater, but at low concentrations ranging from 0.4 to1.3 µg/L. Benzene was not detected in soil near the Plant 2 LNAPL. The Plant 2 LNAPL has been characterized as cutting oil with elevated concentrations of chlorinated volatile organic compounds (CVOCs) and polychlorinated biphenyls (PCBs) and is not considered a significant source of BTEX.

- Acetone: Acetone has been detected in the perched zone in the central portion of Plant 2. Acetone has been detected at concentrations up to 330 µg/L in groundwater and up to 150,000 µg/Kg in soil at a location west of the LNAPL area

in Area 5-2. Acetone was not detected in the perched zone near the coliseum at Plant 3.

With the exception of acetone, the distribution of perched water COCs in the vicinity of the lower 1,4-dioxane plume is limited. The distribution of benzene impacts in particular does not support the distribution of benzene identified within the lower 1,4-dioxane plume. For example, although Area 2 is in the vicinity of the lower plume toe, it is difficult to reconcile this potential source area with deep aquifer impacts identified on the northern portion of Plant 2 and southern Plant 3.

The nature of the benzene and other VOCs in the vicinity of the lower 1,4-dioxane plume appears to be sporadic. For example, although benzene was not detected in boring VAP-P3-IS88, north of Saginaw Avenue, benzene (along with other VOCs) was detected in the monitoring well installed immediately adjacent to this location (MW-13-49) at a concentration of 14 µg/L. Conversely, although benzene and acetone were detected at boring VAP-P2-MI101 at a concentration 130 and 770 µg/L (respectively), it was not detected at monitoring wells installed at similar depths to the east and west. In addition, based on the surrounding VAP data, there does not appear to be a clear association between the benzene impacts identified near Saginaw Avenue and those observed at VAP-P2-MI101 on Plant 2.

It is possible that leakage from the overlying perched zone in the central portion of Plant 2 may contribute impacts such as acetone to the lower 1,4-dioxane plume. However, there is no obvious source of benzene within the perched zone except in Area 2 as outlined above. The general coincident nature of benzene with the lower 1,4-dioxane plume suggests a source area near the coliseum or southern portion of Plant 3. However, benzene is not observed within the coliseum area monitoring wells, indicating either an older release that has since attenuated, or a separate source area (and vertical pathway) not observed during previous RFI activities.

Benzene and acetone within the weathered bedrock are defined to DW Criteria except for benzene to the east near Saginaw Avenue at Monitoring Well MW-13-49. Confirmatory sampling results are pending; if results are below criteria, no additional investigation is warranted. If results exceed criteria, a step out monitoring well location will be considered east of this location. Because the benzene and acetone impacts are co-located with the 1,4-dioxane, the CMS strategy for mitigation of 1,4-dioxane will also address benzene and acetone.

2.1.2.2 Other Constituents of Concern - Metals

Groundwater samples collected during the initial phase of the lower 1,4-dioxane investigation and from deep overburden and weathered bedrock wells installed near the 1,4-dioxane plume indicate generally sporadic concentrations of metals above DW Criteria. Groundwater sampling results are summarized on Tables 2 and 3. Note that although some of the metals results exceed GSI Criteria, GSI is not a complete exposure pathway for groundwater located within the deep aquifer.

Iron and manganese within these samples are consistently elevated and frequently above aesthetic or health-based DW Criteria. Elevated concentrations of these metals can be indicative of anaerobic reducing conditions within the aquifer, conducive to the mobilization of metals from the native aquifer material. This is particularly relevant for arsenic, but also other metals that are bound to iron minerals including copper, cobalt, nickel, lead, vanadium and zinc, which may become mobilized, along with iron, under reducing conditions in the aquifer. Aside from iron and manganese, concentrations of metals greater than DW Criteria are sporadic and inconsistent, both spatially and temporarily, suggesting that exceedances may be due to environmental factors, such as elevated turbidity or slight shifts in the geochemical environmental towards conditions where iron and other metals are more soluble. A complete geochemical conceptual site model will be developed in April 2014 to demonstrate how geochemical conditions may contribute to low-level metals exceedances in the deep aquifer

2.1.3 Hydrogeology of Lower 1,4-Dioxane Plume

As outlined above, the 1,4-dioxane plume was mapped with numerous VAP borings and monitoring wells. The plume was mapped from the suspected source area and tracked to the southeast using an adaptive sampling grid. Based on the distribution of impacts observed during the investigation, the lower 1,4-dioxane migrates from the source area at the coliseum to the southwest. Groundwater elevation measurements collected from the deep monitoring wells installed along the 1,4-dioxane plume reflect a complex heterogeneous aquifer structure. Similar to the perched zone discussed in the RFI Phase 2 Report, the specific depth of a monitoring well plays a large role in the hydraulic head observed at a given location. Large vertical gradients occur in formations with vertical anisotropy and indicate a lack of vertical groundwater communication. Monitoring wells within the deep aquifer at the Site were installed based on COC distribution. Due to large vertical gradients between the deep overburden, weathered bedrock, and bedrock zones, the observed groundwater elevation is variable depending on the specific depth of a well.

Three groundwater elevation contour maps were prepared for the Site: deep overburden (Figure 9) utilizing the deep aquifer water table wells installed around the coliseum source area, weathered bedrock (Figure 10) utilizing wells installed within the weathered bedrock zone, and bedrock (Figure 11) consisting of a site-wide map utilizing all of the bedrock wells. A summary of December 2013 groundwater elevation measured within deep wells is included as Table 4.

Review of Figure 9 indicates the presence of a groundwater mound beneath the coliseum (i.e., recharge zone) with radial groundwater flow away from the area. The 1,4-dioxane migrates away from the source area within the deep overburden (and weathered bedrock) toward Saginaw Avenue. As shown on the cross-sections (Figures 4 and 8), the deep overburden is separated from the weathered bedrock by a layer of glacial till. Groundwater elevation within the deep overburden can be as much as 10 feet higher than within the weathered bedrock zone (e.g., MW-13-48 / MW-13-34). The strong vertical gradient between the deep overburden and weathered bedrock is indicative of the hydraulic separation between the units. A summary of the vertical gradient measured in deep overburden/weathered rock nested wells is included as Table 5.

South of Saginaw Avenue, the bedrock surface rises above the regional water table and the groundwater transport transitions solely to within the weathered bedrock zone. The weathered bedrock zone varies in thickness generally between 5 and 20 feet and marks a transition to more consolidated rock. The hydraulic conductivity of the weathered bedrock zone can vary several orders of magnitude as outlined below in Section 2.1.4. Similar to the shallow perched zone described as part of the RFI Phase 2 Report, a groundwater contour map utilizing wells set within this transition zone (Figure 10) is difficult to interpret because wells set at similar depths along the same transect (perpendicular to the plume and assumed groundwater flow direction) can vary by 6 feet or more due to the heterogeneity of the zone. The horizontal gradient depicted by the weathered bedrock contours suggests groundwater flow from the source area to the southeast, as generally expected, but also from the toe of the plume to the north, meeting somewhere on the northern portion of Plant 2. As this is unlikely, the result suggests that groundwater elevations within this zone are strongly influenced by changes in hydraulic conductivity and vertical gradient at a local scale. The actual migration of 1,4-dioxane within the weathered bedrock is controlled by the permeability structure of the zone, as well as the *effective head*, or "corrected" groundwater elevation, described below for the bedrock aquifer.

For the bedrock aquifer, the effective head can be calculated based on the observed vertical gradients. As indicated in Table 5, the vertical gradient tends to be limited near the coliseum and increases to the south to a maximum of 0.47 foot per foot (ft/ft) downward at wells MW-13-52 / MW-13-50 located on Plant 6. This variation in vertical gradient appears to coincide with bedrock formation. Near the coliseum, where the bedrock encountered consists of the more uniform and permeable Grand River Formation, the vertical gradient is negligible. To the south within the interbedded sandstone and shale of the Saginaw Formation, the gradient is strongly downward. Review of the bedrock wells and other deep boring logs suggests an approximate geologic contact between the Grand River and Saginaw Formations oriented roughly southwest-northeast. The location of the geologic contact is included on Figure 11.

To calculate the effective head for the bedrock aquifer (Figure 11), an average downward gradient 0.4 ft/ft was applied to bedrock monitoring wells installed within the Saginaw Formation, as follows:

Effective GW Elevation:

$GW_{eff} = GW – (dh/dl * \Delta Elev)$, where

GW = measured groundwater elevation
dh/dl = vertical gradient
ΔElev = change in elevation between deepest well and measured well

As shown on Figure 11, the corrected bedrock groundwater contours are a good match for the distribution of the lower 1,4-dioxane plume located within the weathered bedrock zone. An effective head map specifically for the weathered bedrock zone is difficult to calculate because the limited number of the weathered bedrock wells and relative heterogeneity of the zone limit the use of a specific correction factor. However, the distribution of 1,4-dioxane within the weathered bedrock is consistent with a groundwater flow from north to south.

Additional characterization, including direct measurements of flow direction, will be completed prior to the final Corrective Measures Study that will be submitted in June 2014.

2.1.4 Hydraulic Conductivity and Groundwater Velocity

The hydraulic conductivity (K) of the three deep hydrostratigraphic units has been estimated in two ways: through slug testing completed in December 2013, and through specific capacity measurements collected during monitoring well development. A summary of the slug testing results is provided as Table 6. The specific capacity data are summarized in Table 7.

Slug tests were completed using a solid slug lowered into the well. A pressure transducer recorded both the slug-in and slug-out aquifer response at high frequency. Slug test response was analyzed utilizing the Aqtesolv Pro analysis software package (HydroSOLVE, Inc. v4.5), primarily utilizing the Bouwer and Rice (1976) and the KGS (Hyder et al. 1994) methods. Aqtesolv model output for each solution is included as Appendix E on the attached disc.

Specific capacity is a measure of how much water a well can produce (Q) relative to the steady state drawdown (s) observed during pumping. Specific capacity is typically given in gallons per minute per foot of drawdown (gpm/ft). The specific capacity can be converted to aquifer transmissivity (T) utilizing the following empirical relationship derived by Driscoll (1986):

Unconfined aquifer: $T = Q/s * 1,500$

Confined aquifer: $T=Q/s * 2,000$

The K for the specific capacity test is given by T divided by the thickness of the aquifer (b). Only wells that indicated a stable (steady state) drawdown condition during pumping were used for the specific capacity analysis. In general, there is good agreement between the results of the specific capacity testing and the slug testing, and the following discussion uses the results interchangeably. A comparison of wells with hydraulic conductivity derived from both specific capacity and slug testing is provided as Table 8.

In general, the hydraulic testing at the Site indicates several orders of magnitude variation in hydraulic conductivity. Results of the hydraulic testing indicate the following:

- Deep overburden: The K of the silt formation near the source area (MW-12-21) is 0.02 foot per day (ft/day). With the downgradient sandier portion of the deep overburden, the K ranges between 7 and 60 ft/day.

- Weathered Bedrock: The weathered bedrock wells have a wide range of K ranging from 0.2 to 50 ft/day.

- Bedrock: In general, the bulk K measured in wells installed in the Saginaw Formation is on the order of 0.1 ft/day. Wells installed within the Grand River Formation have a bulk K on the order of 1 ft/day. The bedrock K can be significantly higher if fracturing is encountered. For example, MW-12-02, noted with numerous fractures, has a measured K of 78 ft/day.

Groundwater velocity within the plume can be difficult to determine due to the variable horizontal gradient outlined above. Based on assumptions including an overall range in hydraulic conductivity of 0.02 ft/day to 60 ft/day, an assumed effective porosity of 10%, and a variable horizontal gradient that ranges from 0.001 to 0.01 ft/ft, the resulting range of groundwater velocity within the lower 1,4-dioxane plume is between 1 to 2,200 feet per year (ft/yr). A reasonable upper-end estimate for groundwater velocity of approximately 300 to 400 ft/yr can be assumed based on the hypothesis that the lower 1,4-dioxane plume was mobilized following the demolition of Plant 3 in 2007.

Additional characterization of groundwater velocity and flow direction will be completed prior to the final Corrective Measures Study submittal in June 2014. Passive Flux Meters (PFMs, EnviroFlux, Inc.) will be used to provide a direct measurement of groundwater velocity and estimate groundwater flow direction. This information will provide an additional line of evidence to verify the conceptual site model and can be used to help assess the risk of further plume migration.

2.1.5 Hydraulic Communication with Municipal Wells

Absolute pressure transducers were deployed at the Site for a week in October 2012 to assess the connection between the bedrock wells at the Site, municipal pumping, and the shallow perched water. At that time, a bedrock pumping test was being contemplated to demonstrate hydraulic separation of the bedrock aquifer and perched water. The data can be used to evaluate the influence of municipal well pumping on shallow weathered bedrock at the Site. The results of the transducer study were originally provided to the MDEQ as part of the *Bedrock Pumping Test Work Plan,* dated November 15, 2012 (ARCADIS 2012b). The complete memorandum describing the

data, post-processing, and results, including water level graphs, is provided as Appendix F.

Transducers were set at Plant 2 in bedrock wells MW-12-05 and MW-12-06, and shallow overburden wells P2-SB-06 and P2-SB-20, and recorded ambient water level data for one week. The corrected water level data for well MW-12-05 has a slightly increasing trend during the period of record (possibly due to instrument drift) and does not show response to precipitation events. Corrected water levels for MW-12-06 are flat, indicating no changes in aquifer water level during the period of record. Neither MW-12-05 nor MW-12-06 displayed a characteristic drawdown response related to municipal pumping for the period of record. The Lansing BWL has indicated that the pumping periods for individual wells are not recorded in an easily queried format. It is therefore unclear which municipal water wells were operating during the period of record. However, several of the Lansing Township wells are located relatively close to the Site, including well TWP #4 located within 500 feet of the Plant 3 property boundary (1,000 feet from the 1,4-dioxane source area), and are assumed to have been operating periodically during the study. In addition to a lack of hydraulic response to municipal pumping observed at the Site, the distribution of 1,4-dioxane in the deep aquifer and orientation of the plume does not appear to be influenced by the municipal pumping.

The results of the transducer study suggest that regional pumping does not strongly affect the shallow bedrock beneath the Site. Well MW-12-05 and MW-12-06 are located within the Saginaw Formation beneath the lower 1,4-dioxane plume. The result further demonstrates the vertical anisotropy of the Saginaw Formation and suggests limited to no hydraulic connection between regional pumping wells and the lower 1,4-dioxane plume on Plant 2.

Additional characterization of the bedrock water levels will be completed prior to the June 2014 CMS submittal. Pressure transducers will be placed in bedrock wells along the axis of the lower 1,4-dioxane plume, including wells installed within the Grand River Formation located near the 1,4-dioxane source area and Lansing Township well TWP #4. These additional data will be used to further evaluate the potential hydraulic connection between the shallow bedrock at the Site and the municipal water supply wells.

2.2 Metals

Additional investigation was completed to characterize metals in soil and groundwater in several areas of the Site, including:

- Northern Plant 3 – historical arsenic in soil at the property boundary
- Plant 3, Area 16 – metals in soil and groundwater at the property boundary
- Plant 6, Area 5-8 – metals in groundwater near the property boundary
- Plant 6, Area 7 – off-site metals in groundwater
- Plant 6 – metals in bedrock wells MW-04-04 and MW-04-06

There are several areas at the Site where metals in perched water marginally exceed the Groundwater Surface Water Interface (GSI) and/or DW Criteria near to the property boundary. Additional confirmatory samples have been collected in Areas 7 and 16 and the concentrations have generally remained consistent (Area 7) or indicated only sporadic groundwater exceedances (Area 16). Confirmatory samples in Area 5-8 (MW-13-36R) are pending. Even though there are exceedances of criteria, these results do not suggest there is concern under current conditions. Perched groundwater in these locations is not used as a drinking water resource and unlikely to be used for drinking water in the future. Existing or potential off-site exceedances for metals will be addressed as part of the CMS.

The general scope of work for additional metals sampling was outlined within the budget amendment request (Budget Amendment 2, 2013) provided to and subsequently approved by the MDEQ on July 1, 2013. A brief outline of each scope of work is provided below.

The soil sampling analytical results for each area are provided in Table 9, and groundwater analytical results collected from the new monitoring wells are included in Table 3. The laboratory analytical reports for each sample are provided as Appendix C on the attached disc.

2.2.1 Northern Plant 3 - Historical Arsenic in Soil

Historical soil sampling activities completed in the northern portion of Plant 3 during the late 1980s identified arsenic in soil at concentrations above the Groundwater-Surface Water Protection (GSIP) Criteria and the DWP Criteria (4.6 milligrams per kilogram [mg/Kg] for both). The Statewide Default Background (SBG) Criterion for arsenic is 5.8 mg/Kg. The historical arsenic exceedances generally ranged from 6 to 12 mg/Kg. Based on these results, four soil borings were completed in July 2013 at key historical boring locations near the Plant 3 property boundary to verify the historical results. Soil samples at each location were collected at intervals consistent with historical sampling. The location of the historical and 2013 soil boring locations, as well as the sampling results, are summarized on Figure 12.

The four soil borings, SB-P3-BL78, SB-P3-CE80, SB-P3-DM76, and SB-P3-CN180, were advanced adjacent to historical borings 10, 11, 12, and 42, respectively. Sample depth intervals at each boring were selected to be generally consistent with the corresponding historical sampling depth intervals. Samples were submitted to Merit Laboratories for analysis of arsenic.

All of the verification samples collected at the four boring locations were below Part 201 Criteria for arsenic. Arsenic in soil is therefore defined at the property boundary and no further investigation is required.

2.2.2 Plant 3, Area 16 - Extent of metals in soil/groundwater

During the RFI Phase 2, arsenic was detected in soil above DWP Criteria at the southeastern perimeter of Area 16, and in groundwater samples collected from VAP borings at concentrations above the DW Criteria (SB-A16-HU178 and SB-A16-IE168). The extent of arsenic in groundwater southeast of Area 16 was not defined to Part 201 Criteria between Area 16 and the Plant 3 property boundary. Figure 13 provides a summary of the metals detected above the DW / DWP Criteria in Area 16. Additional work was completed in this area to define metals in soil and groundwater, including soil sampling at two soil boring locations near the property boundary, installation of three monitoring wells, and collection of groundwater samples for metals and other site COCs.

2.2.2.1 Soil Results

Additional work was completed in this area in July 2013 to define arsenic and other metals in soil. Soil samples were collected from two soil borings (SB-A16-HU181 and SB-A16-IL168) advanced along the eastern and southern Plant 3 property boundaries and submitted to Merit Laboratories for Target Analyte List (TAL) metals analysis. Although several metals in this area also exceed the GSI/GSIP Criteria, these results are not included on Figure 13 as storm sewers are not present and the GSI pathway is not complete for this area (see additional discussion on GSI in Section 2.4).

As shown on Figure 13, several metals (arsenic, manganese, and lead) still exceed DWP Criteria at the eastern Plant 3 property boundary at SB-A16-HU181. Arsenic was detected at concentrations of 9.1 and 16.7 mg/Kg, in excess of the SBG of 5.8 mg/Kg and the DWP Criterion of 4.6 mg/Kg. Manganese was detected at concentrations slightly in excess of the SBG of 440 mg/Kg. In addition to the DWP Criteria, lead exceeds the Non-Residential Direct Contact (DC) Criteria (900 mg/Kg) at a depth of 4 to 5 ft bgs with a concentration of 1,250 mg/Kg. However, the adjacent property is a 200 ft wide rail yard easement and the owner has refused to allow access for additional sampling. As discussed below, groundwater samples collected from this location do not exceed Part 201 Criteria for lead and arsenic; however, they do exceed DW Criteria for nickel and manganese.

The corrective measure proposed for this area includes maintaining an exposure barrier and placing a deed restriction on the area restricting the excavation and handling of impacted soils. Due to restricted access, the width of the railroad easement (~200 feet), and ambiguity associated with potential metals impacts associated with the railroad easement, additional off-site sampling east of Area 16 and the railroad easement is not proposed at this time.

2.2.2.2 Groundwater Results

As part of the RFI supplemental activities, three monitoring wells were installed in the area, primarily within the saturated shallow fill material (MW-13-31 and MW-13-32) and shallow interbedded zone (MW-13-33). Groundwater samples collected from the wells were submitted for TAL metals analyses, as well as Target Compound List (TCL) VOCs and SVOCs. As shown on Figure 13, several metals, including lead, manganese, nickel, and vanadium exceed the DW Criteria for total metals in Area 16. Due to the high turbidity of the samples observed during sampling, filtered samples were also collected and submitted for dissolved metals analysis for comparison, where

appropriate. The results for metals sampling indicate only manganese and nickel exceed the DW Criteria at the property boundary. In November 2013, the concentration of nickel at MW-13-32 was 0.241 milligram per liter (mg/L) (DW Criterion: 0.10 mg/L). Review of Table 3 indicates that, in August 2013, nickel did not exceed criteria at MW-13-32.

Review of the total and dissolved metals indicates that exceedances for lead and vanadium in Area 16 appear to be associated with the elevated turbidity of the VAP and monitoring well samples.

As outlined in the RFI Phase 2 Report, background concentrations for manganese appear to be elevated regionally. All of the samples collected for manganese in Area 16 are below the 0.860 mg/L Part 201 Residential Heath Based Drinking Water Value (Health Based Criteria).

Based on the results of the supplemental sampling outlined above, the investigation of Area 16 is considered complete. This conclusion is based on the following:

- Lead in soil exceeds the non-residential DC Criteria at 5 to 10 feet below grade. Any potential exposure risk associated with lead in soil will be managed with an exposure barrier and placing a dead restriction on the area restricting the excavation and handling of impacted soils.

- Off-site sampling beyond the Plant 3 eastern property to further delineate metals in soil is not possible due to a denial of access to the adjacent property.

- In November 2013, with the exception of manganese and nickel, metals in groundwater did not exceed DW Criteria at the property boundary. Dissolved manganese is likely naturally occurring and does not exceed Health Based Criteria. During the August 2013 monitoring event, nickel did not exceed DW Criteria although lead exceeded the DW Criteria due to elevated turbidity.

2.2.3 Plant 6, Area 7 – Offsite Metals

The extent of off-site metals in groundwater, including lead, arsenic, and vanadium, at the Plant 6 southern property boundary were not defined to Part 201 Criteria during the RFI Phase 2 activities. An additional off-site monitoring well was installed south of the Site and additional groundwater samples were collected, both from the new well and the existing wells, to better define metals exceedances in groundwater. The location

and recent groundwater sampling results of the Area 7 monitoring wells are presented on Figure 14.

An additional monitoring well, MW-13-35, was installed south of West Michigan Avenue to better define vanadium exceedances detected in on-site monitoring wells in Area 7. Groundwater samples were collected from monitoring well MW-13-35 and submitted for TAL metals analyses. This monitoring well was sampled during September and November 2013. Together with monitoring wells MW-12-15 and MW-12-16, the three wells provide off-site monitoring locations for metals and other exceedances observed in Area 7 groundwater.

The sampling results for MW-13-35 indicate vanadium at concentrations of 0.008 and 0.005 mg/L (November and December 2013 sampling, respectively), slightly in excess of the DW Criterion of 0.0045 mg/L. Recent results for off-site well MW-12-16 also indicate a concentration of arsenic at 0.015 mg/L, slightly above the DW Criterion of 0.010 mg/L. In addition, manganese concentrations exceed DW Criteria at these locations, but are below the Health Based Criteria. Elevated manganese in groundwater appears to be naturally occurring across the region.

The property to the south of Michigan Avenue is the Lansing Sexton High School athletic field, and additional soil borings are not proposed on that property at this time.

2.2.4 Plant 6, Area 5-8 - Metals in Perched Water

The extent of vanadium in groundwater at the Plant 6 eastern property boundary was not defined to Part 201 Criteria during the RFI Phase 2 activities. An additional monitoring well, MW-13-36R, was installed between P6-SB-35 and the Plant 6 property boundary to further characterize vanadium in groundwater. The location and recent groundwater sampling results from monitoring wells in this area are included on Figure 14.

An additional shallow monitoring well, MW-13-36R, was installed along the eastern border of Plant 6 to better define vanadium exceedances detected at P6-SB-35, located 200 feet from the eastern property boundary. Groundwater samples were collected from monitoring well MW-13-36R and submitted for TAL metals analyses. This monitoring well was sampled in December 2013. The sampling results for MW-13-36R indicate total and dissolved vanadium at a concentration of 0.005 mg/L, slightly in excess of the DW Criterion of 0.0045 mg/L.

Further delineation of metals in groundwater at locations off-site to the east is not proposed at this time.

2.2.5 Plant 6 Bedrock Well Replacement

Metals above MDEQ Part 201 DW Criteria have been detected at Plant 6 in historical bedrock wells MW-04-06 (lead) and MW-04-04 (arsenic, beryllium, total chromium, cobalt, lead, manganese, nickel, and vanadium). In addition, MW-04-06 had historically indicated low levels of vinyl chloride (2 µg/L). As outlined in the RFI Phase 2 Report, it is possible that the historical detections at MW-04-04 and MW-04-06 were related to well construction. Bedrock well MW-04-04 was only sampled once in 2004 and then could not be located during the demolition activities at Plant 6. During recent sampling events, a blockage was encountered in well MW-04-06, suggesting a damaged well riser and possible leakage into the well from outside of the casing. Both of these wells were replaced to verify the results in bedrock. The locations of the replacement wells and the November 2013 groundwater sampling results are included on Figure 15.

An excavator was used to locate MW-04-04 beneath the fill material placed as part of the Plant 6 demolition activities in May 2013; however, the well was found to be dry with a total depth of approximately 44 feet below grade, and assumed to be collapsed. Both MW-04-04 and MW-04-06 were abandoned via over drilling and filling the boreholes with bentonite grout according to general MDEQ guidelines. Well abandonment logs are included in Appendix C on the attached disc.

The replacement wells MW-04-04R and MW-04-06R were installed in July 2013. The monitoring well boreholes were advanced to competent rock using sonic methods, a 4-inch steel casing was installed to the top of rock and cemented in place, and then the rig was converted to rock coring to create an open borehole bedrock well. Boring logs for the replacement wells are also included in Appendix C. At each borehole, a 4-inch-diameter steel casing was installed to approximately 20 feet into competent bedrock similar to the original well construction. Each well includes an open bedrock borehole to a depth of approximately 25 feet below the steel casing.

Both wells were sampled during the August and November 2013 sampling events. In November 2013, arsenic at both locations was detected at 0.021 mg/L, in excess of the DW Criterion (0.010 mg/L). Manganese also exceeds the aesthetic DW Criteria at MW-04-06R, but not the Health Based Criteria of 0.840 mg/L. Other metals did not exceed criteria at either well, and vinyl chloride was not detected at MW-04-06R.

2.3 Utility Corridor Assessment

Additional sampling was completed adjacent to large utility corridors (storm and sanitary sewers) as part of the supplemental activities to further evaluate if preferential pathways created by the utility corridors are causing groundwater impacts to migrate around the Site in an unexpected manner. A total of nine soil borings were completed to a depth consistent with the utility invert elevation, and groundwater samples were collected when groundwater was encountered. Only storm sewer lines were included in the assessment because those were the only types of corridors expected to be large and/or deep enough to serve as potentially significant conduits for groundwater migration within the surrounding fill material. The potential for utility corridors to serve as pathways for off-site migration was previously evaluated as documented in the *Utility Corridor Assessment Memorandum* (ARCADIS 2012c). Additional utility corridor assessment activities were proposed as part of that initial assessment. Following comments from the MDEQ, the scope of work was modified as outlined in the email correspondence to the MDEQ dated January 16, 2013.

The original assessment focused on the most likely areas where off-site migration could occur; i.e., within corridors that exit the Site located in areas with groundwater contamination near property boundaries. In the areas where utility corridor samples were collected previously (Plant 2, Area 2 and Plant 6, Area 7), sampling did not indicate off-site migration was occurring. The supplemental activities were completed at key junctions of the storm sewers or at locations near the property boundary to further assess the potential for migration around the Site or off-site.

A total of nine hand auger borings were advanced at Plants 2, 3, and 6 to a depth consistent with the bottom of the targeted utility corridor. Where encountered, groundwater samples were collected using a temporary well and submitted for analysis of TAL metals and TCL VOCs and SVOCs. The locations of the utility corridor samples are provided on Figures 16, 17, and 18 (Plants 2, 3, & 6, respectively). The groundwater sample results are provided in Table 2. Boring logs for each location are included in Appendix C on the attached disc.

Groundwater samples were collected from four of the nine utility corridor borings. Groundwater was not encountered in the remaining five borings. Three of the utility corridor groundwater samples were collected at Plant 2, and the fourth sample was collected at Plant 6. All of the samples were non-detect for VOCs. The only SVOC detected above DW Criteria was bis(2-Ethylhexyl)phthalate (DEHP) at SB-A5.4-MA191, which is located in the northeastern portion of Plant 2. A duplicate sample was

also collected at SB-A5.4-MA191, and DEHP was not detected above the method detection limit. Low concentrations of phthalates detected in numerous soil and groundwater samples collected during the course of the RFI, according to correspondence with Merit Laboratories dated October 4, 2013, are believed to be a laboratory contaminant when present at low concentration.

Arsenic, lead, manganese, selenium, and vanadium were detected at Plant 2 above Part 201 Criteria at SB-A5-LT95. Of these, only dissolved manganese was detected above DW Criteria (but at a concentration less than Health Based Criteria) and dissolved selenium was detected above GSI Criteria. On the southern portion of Plant 6 dissolved vanadium exceeded DW Criteria at SB-A7-TD212. However, the occurrence of low-level metals concentrations in fill material adjacent to utility corridors does not appear to be a GSI issue based on the results of the storm water sampling presented in Section 2.4 below, and as discussed previously, manganese appears naturally elevated across the Site.

Based on the utility corridor assessment sampling results, storm sewer corridors at the Site do not appear to significantly affect contaminant migration.

2.4 Storm Sewer Sampling / GSI Assessment

Groundwater and soil impacts above GSI/GSIP Criteria have been identified in shallow soil and perched water at the Site at depths consistent with the storm sewer invert elevations in certain areas. Samples have been collected from the storm sewer at all discharge points on the Site during dry weather flow conditions to assess whether COCs may be entering the sewer via groundwater infiltration at concentrations that could exceed GSI Criteria at the Grand River. Three additional rounds of storm sewer sampling were completed at the Site in 2013, and flow measurements were collected at the southern Plant 3 outfall and Grand River to characterize the dilution of the Plant 6 discharge. A complete summary of the storm sewer analytical data collected to date is included as Table 10. The sampling locations are summarized on Figures 19 through 21. The laboratory analytical reports are provided as Appendix C on the attached disc.

Initial sampling in November 2012 indicated several metals exceedances at the Plant 6 and Plant 3 outfall locations; however, revised sampling methodology has limited turbidity and follow-up sampling events indicate only the southern outfall of Plant 6 has sporadic detections of selenium and xylenes slightly above the GSI Criteria (Outfall sample P6-MH-SW/P6-MH-SW2). The northern Plant 6 outfall (P6-MH-NE / P6-MH2-

NE), though, has also shown sporadic metals above GSI Criteria, however, the northern Plant 6 outfall discharges to the Lansing wastewater treatment facility. Additional storm sewer sampling completed since the RFI Phase 2 Report is summarized in Section 2.4.1 below.

A summary of the storm sewer sampling provided in the RFI Phase 2 Report asserted that, based on the distance to the Grand River (4,500 feet), the nominal exceedances of selenium and xylenes detected at the southern outfall of Plant 6 were not likely to reach the Grand River (GSI point of compliance) at a concentration in excess of the GSI Criteria. On the way to the river, the storm sewer was expected to receive additional groundwater discharge from the surrounding area that serves to dilute the COCs to concentrations below the GSI Criteria. Based on a suggestion provided by the MDEQ during the joint MDEQ-RACER-BWL meeting held on July 10, 2013, storm water flow measurements were collected during a low-flow period at the storm water discharge at the southern Plant 6 outfall and at the Grand River to provide a basis for dilution calculations. The results of the dilution calculations are discussed in Section 2.4.2 below.

2.4.1 Summary of 2013 Storm Sewer Sampling

Two rounds of storm water sampling were completed prior to preparation of the RFI Phase 2 Report. Three additional sampling events were completed as part of the additional assessment activities in 2013. Storm sewer samples were submitted for analysis of TCL VOCs and SVOCs, and TAL metals.

- During the November 2012 sampling event conducted at Plant 6, LNAPL was observed in Stormceptor ESC-2 located at the outfall of Plant 6 located east of the railroad easement. Following the stormceptor cleaning completed in January 2013, absorbent booms were placed in four structures located upgradient from the stormceptor and the stormceptor was inspected periodically for the presence of LNAPL. Periodic inspection of the absorbent booms and monitoring of stormceptor ESC-2 has not indicated additional accumulation of LNAPL or occurrence of LNAPL in upgradient storm sewer structures. Based on this result, the occurrence of LNAPL within ESC-2 is attributed to a one-time release within the former Plant 6 facility historically or during demolition activities.

- The storm outfall (2-006) for the storm sewer outfall on the western portion of Plant 2 was unable to be located during prior sampling events. The manhole

was located and sampled during September 2013 (sample P2-MH-W). The sample result did not indicate any COCs above Part 201 Criteria.

- During the September 2013 sampling event, concentrations of metals were detected slightly above GSI Criteria at the northeastern portion of Plant 6 (sample P6-MH2-NE). Arsenic was detected at a concentration of 0.011 mg/L compared to a GSI Criterion of 0.010 mg/L, and selenium was detected at a concentration of 0.006 mg/L compared to a GSI Criterion of 0.005 mg/L. Currently, storm sewer discharge from the northern portion of Plant 6 flows to the Lansing wastewater treatment facility where it is treated prior to discharging to the Grand River.

2.4.2 Summary of Storm Water Dilution Calculation

Based on a length of at least 4,500 feet between the Site and the Grand River, it is expected that dilution from groundwater infiltration will reduce the metals or xylenes leaving Plant 6 above the GSI Criteria to a concentration below the GSI Criteria before discharging to the Grand River. This was evaluated by measuring the flow within the sewer at the Plant 6 outfall during dry conditions and comparing that measurement to flow measured at the Grand River outfall located south of the Site. The difference between the flow measurements were then used to estimate a dilution rate for metals and xylenes that could potentially discharge to the Grand River.

The first monitoring location was the 36-inch outfall from Plant 6. The second measurement location was the 72-inch storm sewer outfall to the Grand River. Both measurement locations are shown on Figure 22. Due to the minimal water present at Plant 6 and storm sewer structures present at the Grand River outfall, direct measurements of groundwater velocity were not possible at either location. Rather, groundwater flow at each location was estimated based on visual inspection and the approximate time required to fill a 5-gallon bucket of water. These estimates are considered conservative because not all of the water flowing within the structures could be captured within the bucket, particularly at the 72-inch Grand River outfall where an estimated 25 to 50% of the flow was not captured in the bucket and not included in the measurement. Based on this method, the flow rate at Plant 6 was estimated to be a maximum of 2 gpm (i.e., approximately 3 minutes to fill a 5-gallon bucket). The flow rate at the Grand River was estimated to be a minimum of 12 gpm. A summary of the storm sewer flow measurements and a table summarizing the dilution calculations are included as Appendix G.

Based on these measurements, a conservative dilution factor of 6X is estimated for the storm sewer between Plant 6 and the Grand River. This result indicates the maximum concentrations of selenium and xylenes detected at the Plant 6 outfall (0.006 mg/L and 64 µg/L, respectively) would be 4-5X below GSI Criteria (0.001 mg/L and 10 µg/L, respectively) at the Grand River outfall. This estimate of dilution between the Site and the Grand River suggests that the sporadic exceedances of GSI Criteria that exit the Site at Plant 6 are unlikely to reach the Grand River outfall (point of compliance) at a concentration above GSI Criteria.

2.5 Vinyl Chloride Source Assessment – Bedrock/Deep Overburden on Plant 3

Following the submittal of the RFI Phase 2 Report and presentation of the RFI data to the MDEQ and the Lansing BWL, additional work was completed on the northern portion of Plant 3 to verify that vinyl chloride detected in bedrock and deep overburden monitoring wells was not emanating from Plant 3. Historically, the deep overburden/bedrock nested wells MW-04-03/MW-04-02 and MW-04-04/MW-91-4 located on the northwestern portion of Plant 3 have had vinyl chloride detected at concentrations above Part 201 Criteria. The scope of work outlining the additional characterization of vinyl chloride impacts on Plant 3 was provided to the BWL via email on September 3, 2013 and, following additional discussion with the BWL, was agreed upon on September 24, 2013. The scope of work included the installation of three additional bedrock monitoring wells, installation of two deep overburden monitoring wells, and sampling of two municipal water supply wells located near Plant 3.

The three additional bedrock wells were installed at Plant 3; two of the wells were located between the impacted areas on Plant 3 and the nested wells impacted with vinyl chloride, and one was located between the adjacent property (former heat treatment plant) and the nested wells. The purpose of the additional work was to 1) verify the CVOC impacts observed on the northwestern portion of Plant 3 are not related to the LNAPL area in the central portion of Plant 3, 2) better characterize the deep groundwater on the northern portion of Plant 3, and 3) provide additional information on the bedrock groundwater gradient across the northern portion of Plant 3.

To meet these goals, two wells (MW-13-37 and MW-13-38) were placed in the central portion of Plant 3 to confirm CVOCs are not emanating from the LNAPL area. The third well (MW-13-39B) was placed in the northern end of Plant 3 to provide additional groundwater elevation data in this area and determine if impacts are potentially migrating onto the Site from the former heat treating facility located adjacent to Plant 3 to the northeast. A Freedom of Information Act (FOIA) review completed on

September 30, 2013 indicated the former heat treating facility is a potential source of vinyl chloride, both within the perched zone and within the deep overburden. The location of the additional wells and the location of the former heat treating facility are shown on Figure 23.

At each proposed location, a boring was advanced into the saturated portion of the deep overburden and a VAP sample was collected from this zone. Advancement of the boring then continued into competent rock, where a 4-inch steel casing was installed and cemented in place. Sonic methods were then used to open a bedrock hole beneath the casing to create the bedrock well.

The location and recent groundwater sampling results from monitoring wells in this area are presented on Figure 23. The VAP and monitoring well samples were all non-detect for VOCs, with the exception of 1,4-dioxane detected in the VAP sample MW-13-38 (77 to 82 ft bgs) collected from the deep overburden above bedrock at a concentration of 47 µg/L. During the 2012 RFI activities, 1,4-dioxane was also detected within the deep overburden in this area at boring VAP-A17-DE144 at a concentration of 11 µg/L. Based on these results, a deep overburden well was also installed adjacent to MW-13-38 (MW-13-41) and an additional deep overburden well was installed to the north (MW-13-40) to complete the horizontal delineation. Based on this well and the other deep overburden wells in the area, the 1,4-dioxane appears limited in extent and is defined. Follow-up sampling of MW-13-41 indicates 1,4-dioxane at a concentration of 13 µg/L.

The results of the additional characterization confirm that vinyl chloride detected at the MW-04-03/MW-04-02 and MW-04-04/MW-91-4 well clusters does not emanate from the area of LNAPL and VOC impacts at Plant 3. In addition, the lower 1,4-dioxane investigation (Section 2.1) completed in the southwestern portion of Plant 3 did not detect vinyl chloride or other CVOCs at any sample location.

The bedrock groundwater elevation contour map included as Figure 11 suggests a horizontal gradient from west to east across the northern portion of Plant 3 with a groundwater high coincident with the bedrock valley described in Section 1.3 and in further detail in the RFI Phase 2 Report.

This result suggests the vinyl chloride impacts are not associated with the Site and are potentially associated with one or more of several off-site sources of deep vinyl chloride. Historical vinyl chloride impacts to the Saginaw-Grand River bedrock aquifer are well documented in the Lansing area and have been responsible for shutting down

a number of municipal water supply wells. In addition to the former heat treating facility discussed briefly above, there are three other known facilities with vinyl chloride contamination located northeast of Plant 3. The RFI Phase 2 Report provides a summary of potential off-site sources of contamination (ARCADIS 2013a).

2.5.1 Municipal Water Well Sampling

In parallel with the additional bedrock investigation on Plant 3, the Lansing BWL also requested the sampling of two municipal water supply wells (TWP well #4 and BWL #10-10) located near the Site. The purpose of the sampling was to determine if groundwater impacts could potentially migrate off-site at depths greater than the existing bedrock monitoring well network. The BWL #10-10 well is located northeast of Plant 3 and the TWP well #4 is located west of Plant 3 near the southwestern property boundary. A final plan outlining the methodology for sampling the municipal wells was provided to the MDEQ and BWL on November 13, 2013 via email. The MDEQ provided an email approving the sampling method on the same day.

At the time of sampling, BWL #10-10 was offline and the line-shaft pump had been removed for maintenance. The BWL #10-10 is a 410-foot, 14-inch bedrock well. The steel casing is installed to a depth of approximately 125 feet below grade followed by an open bedrock borehole to depth. A submersible pump was lowered into the well and groundwater samples were collected at 25 to 40-foot intervals beginning at the interval directly below the well casing and continuing to a total depth of 260 ft bgs. The exact depths of sampling were chosen based on inflections visible on a specific conductivity log collected prior to sampling. The conductivity log is included as Appendix H.

Groundwater samples were collected using low-flow sampling methods beginning shallow and continuing to deeper intervals. Samples were collected from depths of 130 ft bgs, 165 ft bgs, 195 ft bgs, 220 ft bgs, and 260 ft bgs. Lansing Township well TWP #4 is a 404-foot bedrock well that was online at the time of sampling. A single sample was obtained from the well sampling port. Groundwater samples for both municipal wells were submitted for analysis of TCL VOCs, 1,4-dioxane, and TAL metals. The results of the sampling event are included in Table 3.

Vinyl chloride was detected at BWL #10-10 at both the 220-foot sample and 260-foot sample intervals at a concentration of 2 µg/L. In addition, review of Table 3 indicates manganese above Part 201 DW Criteria of 0.050 mg/L. The maximum concentration of manganese (330 µg/L) was detected in the 130 ft bgs sample interval and then

decreased with depth. The manganese samples did not exceed the Health Based Criteria of 860 µg/L. Elevated manganese in groundwater appears to be naturally occurring across the region. Based on the decreasing trend observed at BWL #10-10, the manganese in the bedrock aquifer may be a shallow bedrock issue and significant pumping may dilute the manganese to a concentration below Part 201 Criteria.

Based on the results of the additional bedrock sampling and the data from existing bedrock and deep overburden wells at Plant 3, the vinyl chloride detected at BWL #10-10 does not appear to be associated with the Site. Based on the additional bedrock work completed at Plant 3, and the existing deep overburden and bedrock well data presented on Figure 23, a source of vinyl chloride has not been identified at Plant 3. The only detections of vinyl chloride at Plant 3 remain the nested wells on the northwestern portion of the Site.

3. Summary/Conclusions

The remaining data gaps outlined as part of the RFI Phase 2 Report have been addressed as part of the 2013 RFI supplemental activities. Additional work was also completed at the Site to address comments and suggestions provided by the MDEQ and the Lansing BWL.

To date the RFI has adequately characterized the nature and extent of impacts and associated risk with the Site. The data collected allows for the completion of the Final CMS pending the additional transport evaluations and monitoring of the lower 1,4-dioxane plume as noted below. The following conclusions are offered based on the 2013 RFI supplemental activities:

Lower 1,4-dioxane;

- The lower 1,4-dioxane plume is defined horizontally and vertically. The source area for the lower 1,4-dioxane plume is located beneath the "coliseum" on the southwestern portion of Plant 3. The lower 1,4-dioxane plume is approximately 2,400 feet long and migrates from the coliseum to the south-southwest within the deep overburden and weathered bedrock zones at depths typically between 65 to 75 ft bgs. Bedrock wells both along the axis of the plume and within the surrounding area indicate 1,4-dioxane has not migrated into the underlying consolidated bedrock. No additional delineation is proposed for the lower 1,4-dioxane plume at this time.

- The morphology and concentration of 1,4-dioxane along the axis of the plume suggest the plume may still be migrating to the south. Calculated groundwater velocity within the deep overburden and weathered bedrock zones is highly variable; however, based on the length and potential age of the plume (7 to 8 years), the groundwater velocity could be as high as 300 to 400 ft/yr. Additional characterization of groundwater velocity, including direct measurements of groundwater velocity and flow direction, will be completed prior to the June 2014 CMS submittal.

- Benzene and acetone exceed DW Criteria at locations generally coincident with the lower 1,4-dioxane plume. It is possible that leakage from the overlying perched zone in the central portion of Plant 2 may contribute impacts such as acetone to the lower 1,4-dioxane plume, particularly at the toe. However, there is no obvious source of benzene within the perched zone except in Area 2 on the western portion of Plant 2. Benzene and acetone within the weathered bedrock

are defined to DW Criteria except for benzene to the east near Saginaw Avenue at Monitoring Well MW-13-49. Confirmatory sampling results are pending; if results are below criteria, no additional investigation is warranted. If results exceed criteria, a step out monitoring well location will be considered east of this location. Because the benzene and acetone impacts are co-located with the 1,4-dioxane, the CMS strategy for mitigation of 1,4-dioxane will also address benzene and acetone

- Vertical gradients at the Site vary depending on bedrock formation. Vertical gradient within the Grand River Formation beneath the source area is negligible. Vertical gradient in the Saginaw Formation, located beneath the downgradient portion of the plume, is strongly downward indicating a high degree of vertical anisotropy and poor vertical communication. A bedrock groundwater elevation contour map corrected for vertical gradient (i.e., effective head) is a good match for the distribution of the lower 1,4-dioxane plume. Additional characterization of groundwater flow direction, including direct measurements of groundwater velocity and flow direction, will be completed prior to the June 2014 CMS submittal.

- A bedrock groundwater elevation transducer study was completed in 2012 at bedrock wells installed in the Saginaw Formation in the central portion of Plant 2. The results of the study show no discernible hydraulic response related to municipal pumping. This result is indicative of the limited hydraulic connection between the shallow bedrock beneath the lower 1,4-dioxane plume and nearby municipal water supply wells. An additional transducer study will be completed in bedrock wells installed along the axis of the lower 1,4-dioxane plume including wells installed within the Grand River Formation near the coliseum source area prior to the June 2014 CMS submittal.

Metals:

There are several areas at the Site where metals in perched water marginally exceed the Groundwater Surface Water Interface (GSI) and/or DW Criteria near to the property boundary. Confirmatory sampling indicates concentrations remain either consistent (Area 7) or sporadic (Area16) at the property boundary. Even though there are exceedances of criteria, these results do not suggest there is concern under current conditions. Perched groundwater in these locations is not used as a drinking water resource and unlikely to be used for drinking water in the future. Existing or potential off-site exceedances for metals will be addressed as part of the CMS.

- Northern Plant 3 (Areas 14, 17, and 18): Historical soil samples indicated arsenic at concentrations above the current Part 201 DWP Criteria. Soil borings advanced in 2013 at historical locations near the Plant 3 property boundary indicate all verification samples were below Part 201 Criteria for arsenic. Arsenic in soil is therefore defined at the property boundary.

- Plant 3, Area 16: Additional work was completed in this area to define metals in soil and groundwater. The scope of work included two soil borings near the property boundary, installation of three monitoring wells and collection of groundwater samples for metals and other site COCs.

    - Additional soil samples collected at the eastern property boundary indicated several metals still exceed criteria; however, the adjacent property is a 200 ft wide rail yard easement and the owner has refused to allow access for additional sampling.

    - Groundwater samples collected in November 2013 from monitoring well MW-13-32 at the eastern property boundary indicate manganese and nickel exceed DW Criteria. Lead exceeded DW Criteria during the August 2013 sampling event. Manganese is likely naturally occurring and does not exceed Health Based Criteria. Lead appears to be associated with turbidity.

- Plant 6, Area 7: Additional samples collected from off-site monitoring wells located south of Plant 6 indicate vanadium and arsenic concentrations in groundwater slightly above DW Criteria. Vanadium has been detected off-site at concentrations of 0.008 and 0.005 mg/L, slightly above the DW Criteria of 0.0045 mg/L, and arsenic has been detected off-site at a concentration of 0.015 mg/L, slightly above the DW Criteria of 0.010 mg/L.

- Plant 6, Area 5-8: Vanadium in groundwater exceeds the DW Criteria at P6-SB-35, located 200 feet from the eastern property boundary. An additional shallow monitoring well installed along the eastern Plant 6 property boundary also indicates vanadium at a concentration of 0.005 mg/L, slightly above the DW Criteria of 0.0045 mg/L.

- Plant 6, Bedrock Metals: Historically, metals above DW Criteria have been detected at Plant 6 in historical bedrock wells MW-04-06 (lead) and MW-04-04(4) (arsenic, beryllium, total chromium, cobalt, lead, manganese, nickel, and vanadium). In addition, vinyl chloride had been detected at low levels in MW-04-

06. It was postulated that impacts within these wells were potentially related to well construction issues. Both wells were abandoned and replaced in 2013. Groundwater sampling indicated the wells were below DW Criteria for all COCs with the exception of arsenic. Arsenic was detected in both wells at a concentration of 0.021 mg/L, in excess of the DW Criterion of 0.010 mg/L. Vinyl chloride has not been detected in the replacement well MW-04-06R. Confirmatory sampling will be completed to assess the variability of arsenic in bedrock. A geochemical conceptual site model will be developed from data collected as part of the interim groundwater sampling plan to determine how geochemical conditions, either locally or regionally, may contribute to arsenic exceedances in the bedrock aquifer.

Storm sewers/utility corridors:

- Additional Utility Corridor Sampling: At the request of the MDEQ, nine additional soil borings were completed in 2013 adjacent to selected large utility corridors interior to the Site (storm sewers) to evaluate if utility corridors are potential pathways for preferential migration of site-related COCs in groundwater. Groundwater samples were collected from depths consistent with utility invert elevations when encountered. Several COCs were encountered at concentrations exceeding DW or GSI Criteria including arsenic, manganese, selenium, and vanadium, as well as bis(2-Ethylhexyl)phthalate. The COCs do not exceed criteria in storm water sampled downgradient of the impacts (discussed below) and the bis(2-Ethylhexyl)phthalate exceedance was not reported in the duplicate sample collected at this location. Based on the utility corridor assessment sampling results, utility corridors at the Site are not a significant pathway for contaminant migration.

- Storm Sewer Monitoring: Two rounds of storm water sampling were completed prior to the RFI Phase 2 Report. Three additional sampling events were completed as part of the additional assessment activities in 2013. Concentrations of metals and xylenes in storm water in excess of the GSI Criteria were detected in the southern Plant 6 outfall during the January 2013 sampling event. Additional samples collected in 2013 have not indicated GSI exceedances at any of the outfalls on-site with the exception of the northern Plant 6 outfall that currently flows to the Lansing wastewater treatment facility.

    - Flow measurements were collected of storm water discharge both at the southern Plant 6 outfall and at the Grand River outfall to verify that dilution

will reduce the sporadic GSI exceedances detected at the Plant 6 to a concentration below the GSI Criteria at the Grand River. Based on a conservative dilution factor estimate of 6X, the maximum concentrations of selenium and xylenes detected at the Plant 6 outfall (0.006 mg/L and 64 µg/L, respectively) would be 4-5X below GSI Criteria (0.001 mg/L and 10 µg/L, respectively) at the Grand River. This estimate of dilution between the Site and the Grand River suggests that the exceedances of GSI Criteria that may exit the Site at Plant 6 are unlikely to reach the Grand River at a concentration above GSI Criteria.

- Plant 6 Stormceptor ESC-2: Following removal of LNAPL from the stormceptor ESC-2 in January 2013, periodic inspection of the absorbent booms and monitoring of ESC-2 throughout 2013 has not indicated additional accumulation of LNAPL or occurrence of LNAPL in upgradient storm sewer structures. Based on this result, the occurrence of LNAPL within ESC-2 is attributed to a one-time release either within the former Plant 6 facility or during demolition activities.

<u>Plant 3 Vinyl Chloride Assessment:</u>

- Additional characterization was completed on the northern portion of Plant 3 to verify that vinyl chloride detected in nested wells on the northwestern portion of Plant 3 was not related to any known source areas. Vinyl chloride was not detected at any of the five newly installed bedrock or deep overburden monitoring wells. These results show that the vinyl chloride detected in the nested wells on the northwestern portion of Plant 3 are not associated with the Site and may originate from one or more of the known off-site sources for vinyl chloride.

  - 1, 4-Dioxane was detected in the deep overburden at one of the bedrock well boring locations (MW-13-38) and subsequently defined laterally and vertically utilizing two additional deep overburden wells and the existing deep overburden and bedrock monitoring well network. Based on the results from these wells, the extent of 1,4-dioxane in this area appears limited.

  - Municipal Water Supply Wells: Samples were collected from two municipal water supply wells located adjacent to Plant 3. Vinyl chloride was detected in the two deepest samples collected at BWL #10-10 located

northeast of Plant 3. Based on the results of the additional characterization outlined above, the vinyl chloride detected at BWL #10-10 does not appear to be associated with Plant 3. VOCs were not detected in the Lansing Township well located west of Plant 3 (TWP #4) and all metals were below Part 201 Criteria.

3.1 Path Forward

The RFI to date has adequately characterized the nature and extent of impacts and associated risk at the Site and allows for the completion of the Final CMS pending the additional transport evaluations and monitoring of the lower 1,4-dioxane plume. Based on the results of the RFI ARCADIS recommends to following:

- Confirmatory sampling results for benzene at MW-13-49 are currently pending; if the benzene results are below criteria, no additional investigation is warranted. If results exceed criteria, a step out monitoring well location will be considered.

- Passive Flux Meter (PFM) Study - February-March 2014 - Additional characterization of groundwater velocity and flow direction will be completed at monitoring wells installed within the lower 1,4-dioxane plume.

- Bedrock Transducer Study - March 2014 - Additional characterization of the bedrock water levels will be completed in bedrock well located below and near to the lower 1,4-dioxane plume.

The following submittals will be prepared as recommended in the Draft Corrective Measures Study (Draft CMS, ARCADIS 2013b):

- Groundwater Plume Stability and Geochemical Assessment Memo - April 2014 - This submittal will provide a preliminary assessment of plume stability and a geochemical model summarizing groundwater conditions at the Site.

- Final Corrective Measures Study - June 2014 - A Final CMS will be prepared and submitted to MDEQ for review.

- Revised Interim Groundwater Monitoring Plan - April 2014 - This plan will outline the recommendations for continued groundwater monitoring at the Site. The revised plan will be based on the results of the groundwater monitoring to date, the plume stability and geochemical assessment, and additional data required for

the development of a groundwater monitoring program to support corrective measures.

4. References

ARCADIS. 2008. Current Conditions Report (CCR) for GM Lansing Plants 2, 3 & 6. August 1.

ARCADIS. 2012a. Resource Conservation and Recovery Act Facility Investigation (RFI) Work Plan, Phase 2, Plants 2, 3, & 6, Lansing, Michigan. March 12.

ARCADIS. 2012b. Bedrock Pumping Test Work Plan, RACER Trust Plants 2, 3 & 6, Lansing, Michigan. November 15.

ARCADIS. 2012c. Utility Corridor Assessment Memorandum, RACER Trust, Plants 2, 3 & 6, Lansing, Michigan. December 3.

ARCADIS. 2013a. Resource Conservation and Recovery Act Facility Investigation Supplemental Phase 2 Activities Summary Report, RACER Trust, Plants 2, 3 & 6, Lansing, Michigan. April 4.

ARCADIS. 2013b. Draft RCRA Correction Action, Corrective Measures Study, Plants 2, 3 & 6 Industrial Lansing, Lansing, Michigan. June.

Bouwer, H., and R.C. Rice. 1976. A slug test method for determining hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells, Water Resources Research. 12(3): 423-428.

Driscoll. 1986. Groundwater and Wells , St. Paul, Minnesota, Johnson Division, second edition, 1089 p

Hyder, Z., J.J. Butler, Jr., C.D. McElwee, and W. Liu, 1994. Slug tests in partially penetrating wells, Water Resources Research, vol. 30, no. 11, pp. 2945-2957.

United Stated Geological Survey and National Parks Service. 2000. Geologic Provinces of the United States. Retrieved April 21, 2006 from: www2.nature.ups..gov/geology/usgenpa/province.

ARCADIS

Tables

Table 1
Summary of Project Correspondence and Submittals
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Date	Originator	Recipient(s)	Type of Correspondence	Subject	Subject Details	Purpose of Correspondence
August 1, 2008	ARCADIS	GMC	Hardcopy	Current Conditions Report for Lansing Plants 2, 3 & 6	CCR Report submitted to MDEQ on 08/01/2008. No response requested from MDEQ.	Submittal
September 1, 2008	ARCADIS	GMC and MDEQ	Hardcopy	Draft RFI Activities Matrix and Figures, Lansing Plants 2, 3 & 6	Draft matrix and figures listing AOIs to be investigated submitted to MDEQ for their review and comment.	Submittal
February 1, 2009	ARCADIS	GMC and MDEQ	Hardcopy	Updated Draft RFI Activities Matrix and Figures, Lansing Plants 2, 3 & 6	Updated draft matrix and figures listing AOIs to be investigated submitted to MDEQ for their review and comment.	Submittal
August 1, 2010	ARCADIS	MLC and MDEQ	Meeting	Meeting with MDEQ to discuss reduced list of AOIs for the Lansing Plants	Updated draft matrix and figures listing AOIs to be investigated submitted to MDEQ for their review and comment.	Meeting
March 1, 2011	ARCADIS	RACER and MDEQ	Hardcopy	Updated Draft RFI Activities Matrix and Figures, Lansing Plants 2, 3 & 6	Updated draft matrix and figures listing AOIs to be investigated submitted to MDEQ for their review and comment.	Submittal
June 1, 2011	ARCADIS	RACER and MDEQ	Hardcopy	Updated Draft RFI Activities Matrix and Figures, Lansing Plants 2, 3 & 6	Updated draft matrix and figures listing AOIs to be investigated submitted to MDEQ for their review and comment.	Submittal
July 8, 2011	MDEQ	RACER and ARCADIS	Letter	Updated Draft RFI Activities Matrix and Figures, Lansing Plants 2, 3 & 6 - Dated June 22, 2011.	MDEQ Approval letter dated July 8, 2011 of the Updated Draft RFI Activities Matrix and Figures dated June 22, 2011	Approval
August 1, 2011	ARCADIS	RACER and MDEQ	Hardcopy	RFI Work plan, RACER Lansing Plants 2, 3 & 6 Quality Assurance Project Plan, RACER Lansing Plants 2, 3 & 6 Field Sampling Plan, RACER Lansing Plants 2,3 & 6	Submitted the RFI Work plan, QAPP and FSP to MDEQ for review and approval.	Submittal
September 26, 2011	MDEQ	ARCADIS	Hardcopy	RFI Work plan, RACER Lansing Plants 2, 3 & 6 Quality Assurance Project Plan, RACER Lansing Plants 2, 3 & 6 Field Sampling Plan, RACER Lansing Plants 2,3 & 6	Approval with modifications of the RFI Work plan, QAPP and FSP from MDEQ in a letter dated 9/26/2011.	Submittal
October 1, 2011	ARCADIS	RACER	Hardcopy	Public Involvement Plan	Provided RACER with a draft copy of the PIP. Because the PIP will be an evolving document the no final copy submitted.	Submittal
December 6, 2011	ARCADIS	RACER	Email with file attached	2012 EA Annual Budget Request	Submitted original 2012 EA Budget Request to RACER. Original scope and cost estimates pulled directly from RCES.	Submittal
December 12, 2011	RACER	ARCADIS	Email with file attached	2012 EA Annual Budget Request	Original 2012 EA Budget Request approved and signed by RACER on 12/12/11	Submittal
January 1, 2012	ARCADIS	RACER and MDEQ	Hardcopy	RACER RFI Phase 1 Activities Summary Report Lansing Plants 2, 3 & 6	Submitted the RACER RFI Phase 1 Activities Summary Report for Lansing Plants 2, 3 & 6 to RACER and MDEQ on 01/30/12. Report summarizes the investigation activities completed in 2011.	Submittal
February 1, 2012	ARCADIS	ARCADIS	Email	MDEQ FOIA request for Ashland Chemical Property	ARCADIS completed a search of the files MDEQ has on the Ashland Chemical Site in Lansing. File search was completed on 02/14/12.	Request for Information
March 1, 2012	ARCADIS	RACER and MDEQ	Hardcopy	RACER RFI Work Plan, Phase 2	Submitted work plan to MDEQ and RACER on 03/12/12. Work Plan to be completed in 3 stages: Assessment Stage (4/16-6/8/12) Characterization Stage (9/5-9/25/2012 Delineation Stage (11/7-11/30/2012)	Submittal
March 1, 2012	ARCADIS	RACER and MDEQ	Hardcopy	Bedrock Sentinel Monitoring Well Installation Work Plan	Submitted the Bedrock Sentinel Monitoring Well Installation Work Plan to MDEQ for review	Submittal
March 29, 2012	ARCADIS	RACER and MDEQ	Email	RACER Drilling Water Question	Request to discharge drilling water onto the ground and MDEQ response agreeing to allow the drilling water to be dispensed onto the ground. Request and response via emails dated 03/29/12.	General Inquiry
April 24, 2012	MDEQ	ARCADIS	Email	RACER RFI Work Plan, Phase 2	MDEQ approval of the RFI Work Plan Phase 2 provided via email on 04/24/12	Approval
July 1, 2012	ARCADIS	RACER and MDEQ	Hardcopy	RFI Phase 2 Work Plan - Characterization Stage SOW	RFI Phase 2 Work Plan - Characterization Stage SOW submitted to MDEQ.	Submittal
August 13, 2012	ARCADIS	MDEQ	Email	RFI Phase 2 Work Plan - Characterization Stage SOW Comments	PC response to questions from MDEQ related to historical data used in model to develop SOW.	Response to Comments
August 21, 2012	MDEQ	ARCADIS and RACER	Letter	RFI Phase 2 Work Plan - Characterization Stage SOW	Approval letter from MDEQ for the RFI Phase 2 Work Plan - Characterization Stage SOW. Letter dated 08/21/12	Approval
August 1, 2012	ARCADIS	RACER	Email with file attached	2012 Annual EA Budget Amendment Request #1	Submitted 2012 BA #1 to RACER on 8/1/12. Requested funds to cover additional investigation of expanded number of AOIs.	Submittal

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August 3, 2012	RACER	ARCADIS	Email	2012 Annual EA Budget Amendment Request #1	RACER and MDEQ approved (signed) BA #1 on 08/03/12	Approval
August 16, 2012	ARCADIS	RACER	Email with file attached	2012 Annual EA Budget Amendment Request #2	Submitted BA #2 to RACER on 8/16/12. Requested funds to cover increased number of borings/samples collected at each AOI. Original estimates based on 3 boring/AOI and 3 samples/boring. Also requested funds to evaluate GSI criteria and complete groundwater sampling from within the storm sewers.	Submittal
August 24, 2012	RACER	ARCADIS	Email	2012 Annual EA Budget Amendment Request #2	RACER and MDEQ approved (signed) BA #2 on 08/29/12	Approval
August 13, 2012	ARCADIS	MDEQ	Email	RACER Lansing Sample Parameters	ARCADIS request to reduce parameters analyzed during investigation. Specifically request to reduce SVOCs to PNAs, where applicable, and to reduce list of metals.	Submittal
August 29, 2012	ARCADIS	MDEQ	Email	Access to Adams Plating Site and to Collect Groundwater Samples from the APC wells.	ARCADIS requests access to the APC property and for permission to sample the APC wells. MDEQ to coordinate with the APC PM for access.	Request for Information
August 29, 2012	MDEQ	MDEQ	Email	Access to Adams Plating Site for Off-Site Groundwater Samples	update from MDEQ on coordination with APC PMs to get us access to APC property to sample wells.	Response to Comments
September 14, 2012	ARCADIS	RACER and MDEQ	Email	Adams Plating Company Groundwater Sampling Plan.	Submitted Work Plan to MDEQ for sampling the groundwater monitoring wells at Adams Plating. MDEQ responded with questions about methods and pump type..	Submittal
September 26, 2012	ARCADIS	MDEQ	Email	RACER Updates	Email exchanges updating MDEQ with findings from the Characterization Phase of the investigation and proposing additional contingency VAP borings at select locations. MDEQ approval on contingency boring locations via email dated 09/13/12	Approval
October 15, 2012	ARCADIS	MDEQ	Email with file attached	RACER Lansing - Storm water Sampling Plan	Submitted Storm water Sampling Plan, near the property boundaries, to MDEQ on 10/18/12.	Submittal
October 15, 2012	MDEQ	ARCADIS	Email	RACER Lansing - Storm water Sampling Plan	MDEQ approval of the Storm water Sampling Plan. Approval via email dated 10/18/12	Approval
October 15, 2012	ARCADIS	MDEQ	Email	RACER Lansing Pump Test	Discussed completing pump tests on bedrock wells to see if influence on drinking water aquifer present. Also discussed transducer data collected in Oct. 2012.	General Correspondence
November 2, 2012	ARCADIS	RACER	Email with file attached	2012 Annual EA Budget Amendment Request #3	Submitted 2012 BA #3 to RACER on 11/2/12. Requested funds to cover additional borings/samples at the AOIs, to conduct a utility corridor investigation near the property boundary, to complete soil gas sampling, to complete pump test and to complete an LNAPL mobility assessment at Plants 2 & 3.	Submittal
November 15, 2012	RACER	ARCADIS	Email with file attached	2012 Annual EA Budget Amendment Request #3	RACER and MDEQ approved (signed) BA #3 on 11/15/12	Approval
November 26, 2012	ARCADIS	MDEQ	Email with file attached	RACER Lansing Pumping Test Work Plan	Submitted Pump Test Work Plan to MDEQ for review and approval.	Submittal
November 27, 2012	ARCADIS	MDEQ	Email	RACER Lansing Pumping Test Work Plan	Follow up with MDEQ on review of Work Plan. MDEQ to discuss internally with there experts and get back to us. Possible test cancellation.	General Correspondence
December 3, 2012	ARCADIS	MDEQ	Email with file attached	RACER Trust Utility Corridor Assessment Work Plan	Submitted Utility Corridor Assessment Work Plan to the MDEQ, via memo format, on 12/03/12.	Submittal
December 21, 2012	MDEQ	ARCADIS	Email	Comments on RACER Lansing Storm Sewer Sampling Summary Report	MDEQ comments to the Storm water Sewer Sampling Report. MDEQ thinks Stormceptor should remain in place (interim measure). Metals exceedances, whether total or dissolved, still coming from site and need to be addressed.	Response to Submittal
December 1, 2012	ARCADIS	RACER	Email with file attached	RACER Lansing - 2013 EA Annual Budget Request	Submitted final 2013 Annual Budget Request to RACER on 12/18/12. Original budget request to cover PM and routine GWS only.	Submittal
January 1, 2013	RACER	ARCADIS	Email	RACER Lansing - 2013 EA Annual Budget Request	RACER and MDEQ approved (signed) the 2013 Annual Budget request on 12/20/12 and 01/2/13 respectively.	Approval
January 12, 2013	ARCADIS	MDEQ	Email	RACER Lansing - response to comment related to Soil Gas sampling and Utility Corridor Assessment	Email to MDEQ to inquire if MDEQ has reviewed ARCADIS response to MDEQs comments	General Correspondence
January 24, 2013	MDEQ	RACER and MDEQ	Email	RACER Lansing - response to comments related to soil gas sampling and the utility corridor assessment	Approval from MDEQ related to soil gas sampling and utility corridor assessment work plans.	Approval
February 28, 2013	ARCADIS	RACER and MDEQ	meeting	MDEQ Delineation Milestone Meeting.	Meeting at MDEQ to discuss the Phase 2 Investigation results and delineation of each AOI.	Meeting

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February 28, 2013	ARCADIS	RACER	Email with file attached	2013 EA Budget Amendment Request #1	Submitted 2013 BA #1 to RACER. BA #1 to cover costs for utility corridor investigation, additional storm sewer sampling, to complete the NAPL mobility assessment and to begin the 1,4-dioxane investigation at Plant 3.	Submittal
March 1, 2013	RACER	ARCADIS	Email	2013 EA Budget Amendment Request #1	2013 BA #1 approved by MDEQ on 03/08/2013	Approval
April 3, 2013	ARCADIS	RACER and MDEQ	Hardcopy	RACER Lansing RFI Phase 2 Activities Summary Report	Submitted the RACER Lansing RFI Phase 2 Activities Summary Report to RACER and MDEQ on April	Submittal
April 11, 2013	ARCADIS	RACER and MDEQ	Email with file attached	Plant 3 1, 4-dioxane Results	ARCADIS update to MDEQ on 1,4-dioxane investigation. Results indicate east and vertical delineation incomplete, coliseum recharge affecting plume migration, will continue investigation consistent with approved contingency scope - install 3 overburden wells and 1 overburden well	Submittal
May 1, 2013	ARCADIS	RACER and MDEQ	Harcopy	RACER Lansing - Revised Interim Groundwater Sampling Work Plan	Submitted Revised Interim Groundwater Sampling Work Plan to MDEQ for review and approval. Work plan addresses the issue of turbidity and how we propose to purge/redevelop high turbidity wells.	Submittal
May 2, 2013	ARCADIS	RACER and MDEQ	Email with file attached	RACER Lansing - Plant 3 1, 4-Dioxane Investigation	Update to the MDEQ summarizing the Plant 3 1,4-dioxane investigation. The southeast boring, completed as part of the contingency borings, turned up 1,4-dioxane above criteria, 130 ug/L in the deep interval (on top of rock) and 38 ug/L in the monitoring well set a few feet above. Attached is the proposed conceptual layout for additional borings to define the extent of the 1,4-dioxane plume.	Submittal
May 13, 2013	MDEQ	RACER and MDEQ	Email	RACER Lansing - Plant 3 1, 4-Dioxane Investigation	MDEQ reviewed info regarding the Plant 3 1, 4-dioxane investigation and concurs with the proposed conceptual layout for additional borings.	Approval
June 1, 2013	ARCADIS	RACER	Email with file attached	2013 EA BA #2 request	Submitted BA #2 budget request to RACER on 6/12/2013. 2013 BA #2 to cover extended 1,4-dioxane investigation and collection of groundwater geochemical parameters	Submittal
June 6, 2013	MDEQ	RACER and MDEQ	Email	RACER Lansing - Revised Interim Groundwater Sampling Work Plan	DEQ reviewed the Revised Interim GWS Work Plan and found it acceptable, need to provide DEQ with a hard copy for their records.	Approval
June 13, 2013	ARCADIS	RACER, MDEQ and BWL	Meeting	Meeting with BWL	Meeting with BWL to discuss the results of the investigation to date and to get input from BWL	Meeting
June 27, 2013	ARCADIS	RACER and MDEQ	Email with file attached	RACER Lansing Plants 2,3 and 6 Corrective Measures Study	Submitted Draft RCRA Corrective Action Corrective Measures Study Report (electronically) to MDEQ on 06/27/13	Submittal
July 10, 2013	ARCADIS	RACER, MDEQ, BWL and Lansing Township	Meeting	Corrective Action Meeting with various stakeholders (RACER, MDEQ, BWL and Lansing Township).	Meeting to the various stake holders to discuss the proposed corrective measures. Meeting took place 07/10/13	Meeting
August 8, 2013	ARCADIS	MDEQ	Email with file attached	RACER Lansing - addendum to interim groundwater sampling plan - August 2013	Discussion of elevated turbidity present in the monitoring wells and how it will be addressed during the future sampling events.	General Correspondence
August 8, 2013	MDEQ	ARCADIS	Email	RACER Lansing - addendum to interim groundwater sampling plan - August 2013	MDEQ approved addendum to interim GWS which requested not to purge 3 hours on high turbidity wells. If turbidity is elevated AUS will collect total and dissolved metals samples.	Approval
August 15, 2013	BWL	RACER, ARCADIS, MDEQ and Lansing Township	Harcopy	Comments to RFI, CMS and BWL	Letter from BWL, dated 8/19/13, related to comments/concerns to the RFI and proposed corrective measures reports and the stakeholders meeting from 07/10/13	Response to Submittal
August 19, 2013	ARCADIS	RACER, MDEQ, BWL and Lansing Township	Email	RACER Lansing - Municipal Well Sampling	Email to MDEQ summarizing the BWL and Lansing Township request that ARCADIS sample municipal wells BWL 10-10 and Twp. Well #4 and ARCADIS agreement to grant request.	General Correspondence
September 1, 2013	ARCADIS	RACER	Email with file attached	2013 EA BA #3 Request	Submitted BA #3 request to RACER on 09/18/2013. BA #3 to cover additional 1,4-dioxane investigation, meeting with stake holders and groundwater sampling	Submittal
September 1, 2013	ARCADIS	RACER	Email	2013 EA BA #3 Request	2013 BA #3 approved (signed) by RACER on 09/23/13	Approval
September 4, 2013	ARCADIS	RACER and MDEQ	Meeting	RACER Lansing RFI-CMS Update	Meeting with MDEQ to discuss RFI activities, surface cover/O&M, BWL comment letter, updated CMS costs and budget amendments	Meeting
September 12, 2013	ARCADIS	RACER, MDEQ and BWL	Meeting	RACER Lansing - BWL Bedrock Summary	Discussion with BWL related to CSM, deep 1,4-dioxane investigation, CVOCs, and regional vinyl chloride	Meeting
September 24, 2013	ARCADIS	RACER and BWL	Email	RACER Lansing - BWL Plant 3 Vinyl Chloride Bedrock Well Install	Email correspondence with BWLs consultant related to the installation of bedrock monitoring wells at the northern end of Plant 3. Proposed to install 3 bedrock wells to better understand the Vinyl Chloride impacts and to confirm the Vinyl Chloride is related to an off site source. BWL agreed to approach in the email chain and Phone conversation between 0925/13 and 09/25/13.	General Correspondence

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September 24, 2013	ARCADIS	RACER and MDEQ	Email with file attached	RACER Lansing Plants - Groundwater Restricted Area for City of Lansing	Provided MDEQ with existing language from the City ordinance restricting groundwater use and wells within the City proper.	Submittal
September 25, 2013	ARCADIS	RACER and MDEQ	Email with file attached	Plant 2 & 3 Conceptual 1, 4-dioxane investigation	Submitted the Plant 2 & 3 Conceptual 1, 4-dioxane investigation scope of work to MDEQ via an email dated 09/25/13 for their review and approval.	Submittal
October 1, 2013	MDEQ	RACER and MDEQ	Email	Plant 2 & 3 Conceptual 1, 4-dioxane investigation	DEQ reviewed the conceptual 1,4 dioxane investigation plans and find them to be acceptable with the following understanding based on phone conversation with Joe Rogers; all wells/borings being installed in areas of known groundwater contamination would be double cased as described in the weathered bedrock VAP sampling bullet of the 1,4-dioxane conceptual work plan.	Approval
November 13, 2013	ARCADIS	RACER and MDEQ	Email	BWL Well Sampling Work Plan	Submitted proposed sampling plan to MDEQ for their review and approval via an email dated 11/13/13	Submittal
November 13, 2013	MDEQ	ARCADIS	Email	BWL Well Sampling Work Plan	MDEQ approval of the proposed BWL Well Sampling Plan via an email dated 11/15/2013	Approval
November 13, 2013	ARCADIS	RACER and MDEQ	Email with file attached	Work Plan - Delineation of Excavation Areas at Plant 6	Submitted the Work Plan for delineation of excavation areas at Plant 6 to MDEQ for review and approval.	Submittal
November 21, 2013	ARCADIS	RACER, HMA and MDEQ	Meeting	RACER Lansing CSM Review	Meeting to discuss CSM related to 1,4-Dioxane investigation/treatment	Meeting
November 22, 2013	MDEQ	RACER	Email	Work Plan - Delineation of Excavation Areas at Plant 6	MDEQ approval of the Delineation of Excavation Areas Work Plan. Approval via email dated 11/22/13.	Approval
January 15, 2014	ARCADIS	MDEQ and RACER	Email with file attached	4th Quarter 2013 Quarterly Progress Report	Submitted 4Q13 Quarterly Progress Report to MDEQ	Submittal

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-22 89 - 94 03/28/13 Plant 3	MW-13-23 77 - 81.5 03/29/13 Plant 3	MW-13-23 69 - 74 04/02/13 Plant 3	MW-13-24 96 - 101 04/01/13 Plant 3	MW-13-24 69 - 74 04/03/13 Plant 3	MW-13-25 85 - 90 04/02/13 Plant 3	MW-13-25 67 - 72 04/03/13 Plant 3	MW-13-26 103 - 108 04/03/13 Plant 3	MW-13-26 72 - 77 04/04/13 Plant 3	MW-13-27 77 - 80 04/15/13 Plant 3	MW-13-27 67 - 72 04/24/13 Plant 3
Volatile Organics																		
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	**52**	**27**	**14**	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	**124**	**20**	<10	<10	<10	**11**	<10	<10	**10**	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	**2**	<1	**2**	**1**	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	**17**	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-22 89 - 94 03/28/13 Plant 3	MW-13-23 77 - 81.5 03/29/13 Plant 3	MW-13-23 69 - 74 04/02/13 Plant 3	MW-13-24 96 - 101 04/01/13 Plant 3	MW-13-24 69 - 74 04/03/13 Plant 3	MW-13-25 85 - 90 04/02/13 Plant 3	MW-13-25 67 - 72 04/03/13 Plant 3	MW-13-26 103 - 108 04/03/13 Plant 3	MW-13-26 72 - 77 04/04/13 Plant 3	MW-13-27 77 - 80 04/15/13 Plant 3	MW-13-27 67 - 72 04/24/13 Plant 3
Semivolatile Organics																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1 J
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	NA	NA	<1 J	<1	<1 J	<1	<1	<1	NA	<1 J
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1 J	<1	<1 J	<1	<1	<1	NA	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1 J
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	NA	NA	<1 J	<1	<1 J	<1	<1	<1	NA	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1 J	<1	<1 J	<1	<1	<1	NA	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	NA	NA	<1 J	<1	<1 J	<1	<1	<1	NA	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	NA	NA	<1 J	<1	<1 J	<1	<1	<1	NA	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	NA	NA	<1 J	<1	<1 J	<1	<1	<1	NA	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<2	NA	NA	<2 J	<2 J	<2 J	<1 J	<2 J	<1 J	NA	<1 J
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1 J	<1	<1 J	<1	<1	<1	NA	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1 J
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	**2**	NA	NA	<2	<2	<2 B	<3 B	<2	<1	NA	<1
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	**7**	NA	NA	<6 B	**4**	**13 B**	<1	**3**	**3**	NA	<1 J
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<1	NA	NA	<1	<1	<1	<2	<1	<2	NA	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<2	NA	NA	<2	<2	<2	<2 B	<2	<1 B	NA	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<2	NA	NA	<2	<2	<2	<1	<2	<1	NA	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	NA	NA	<1 B	<1 B	<2 B	<4 B	<1 B	<3 B	NA	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	NA	NA	<1	<1	<1	<1	<1	<1	NA	<1

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-22 89 - 94 03/28/13 Plant 3	MW-13-23 77 - 81.5 03/29/13 Plant 3	MW-13-23 69 - 74 04/02/13 Plant 3	MW-13-24 96 - 101 04/01/13 Plant 3	MW-13-24 69 - 74 04/03/13 Plant 3	MW-13-25 85 - 90 04/02/13 Plant 3	MW-13-25 67 - 72 04/03/13 Plant 3	MW-13-26 103 - 108 04/03/13 Plant 3	MW-13-26 72 - 77 04/04/13 Plant 3	MW-13-27 77 - 80 04/15/13 Plant 3	MW-13-27 67 - 72 04/24/13 Plant 3
Inorganics																		
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	**0.013** [ab]	**0.047** [ab]	**0.016** [ab]	**0.009**	**0.011** [ab]	**0.019** [ab]	**0.006**	**0.006**	**0.013** [ab]	**0.064** [ab]	**0.005**
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	**0.045**	**0.28**	**0.117**	**0.112**	**0.124**	**0.252**	**0.124**	**0.117**	**0.134**	**0.444**	**0.105**
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	**0.32**	**0.47**	**0.31**	**0.1**	**0.12**	**0.12**	**0.09**	**0.22**	**0.19**	**0.17**	**0.08**
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	<0.0010	**0.0013**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	**0.0029**	<0.0010
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	**0.01**	**0.126** [a]	**0.048**	**0.032**	**0.032**	**0.046**	**0.008**	**0.024**	**0.026**	**0.103** [a]	<0.010
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	<0.010	**0.049** [b]	**0.028**	<0.010	**0.018**	**0.018**	<0.010	<0.010	**0.023**	**0.062** [b]	<0.010
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	**0.002**	**0.029** [b]	**0.041** [b]	**0.018**	**0.036** [b]	**0.01**	**0.012**	**0.009**	**0.006**	**0.007**	**0.003**
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	**0.004**	**0.028** [a]	**0.019** [a]	**0.015** [a]	**0.028** [a]	**0.021** [a]	**0.003**	**0.013** [a]	<0.002	<0.002	<0.002
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	**0.37** [a]	**8.04** [ab]	**5.67** [ab]	**0.914** [a]	**4.91** [ab]	**4.54** [ab]	**1.21** [a]	**1.27** [a]	**4.68** [ab]	**19.9** [ab]	**0.82** [a]
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	<0.0001	**0.001** [b]	**0.0003** [b]	<0.0001	**0.0003** [b]	**0.0004** [b]	<0.0001	<0.0001	**0.0005** [b]	**0.0012** [b]	<0.0001
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	**0.039**	**0.2** [ab]	**0.207** [ab]	**0.032**	**0.161** [ab]	**0.105** [a]	**0.041**	**0.024**	**0.148** [ab]	**0.486** [ab]	**0.014**
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	<0.002	**0.005**	**0.005**	**0.004**	**0.005**	**0.008** [b]	**0.002**	**0.003**	**0.003**	**0.015** [b]	<0.005
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	<0.0002	**0.0006** [b]	<0.0002	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002	<0.0002	**0.0031 J** [b]
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	**0.008** [a]	**0.043** [ab]	**0.024** [a]	**0.011** [a]	**0.02** [a]	**0.017** [a]	**0.004**	**0.007** [a]	**0.005** [a]	**0.023** [a]	<0.002
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	**0.053**	**7.65** [ab]	**1.41** [b]	**5.03** [ab]	**1.6** [b]	**22.8** [ab]	**0.097**	**7.6** [ab]	**3.26** [ab]	**28.5** [ab]	**0.024**
Inorganics-Filtered																		
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	**0.012** [ab]	**0.011** [ab]	**0.003**	**0.005**	**0.002**	**0.002**	**0.004**	**0.003**	**0.002**	**0.002**	**0.005**
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	**0.04**	**0.047**	**0.04**	**0.077**	**0.058**	**0.152**	**0.126**	**0.099**	**0.052**	**0.038**	**0.102**
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	**0.31**	**0.48**	**0.31**	**0.09**	**0.11**	**0.1**	**0.09**	**0.21**	**0.18**	**0.12**	**0.07**
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.005	<0.005	<0.005	<0.010	<0.010
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	<0.010	**0.019**	**0.012**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	<0.002	**0.005**	**0.017**	**0.002**	**0.003**	**0.006**	**0.003**	**0.005**	<0.002	<0.002	**0.002**
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	<0.003	**0.012** [a]	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	**0.15** [a]	**0.89** [a]	**1.44** [a]	**0.239** [a]	**0.994** [a]	**0.683** [a]	**0.948** [a]	**0.454** [a]	**0.741** [a]	**1.9** [a]	**0.881** [a]
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	**0.036**	**0.06**	**0.114** [a]	**0.015**	**0.094**	**0.027**	**0.035**	**0.015**	**0.049**	**0.036**	**0.023**
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	<0.002	<0.002	<0.002	**0.003**	**0.003**	**0.003**	<0.002	<0.002	**0.003**	**0.003**	**0.006** [b]
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0035 J** [b]
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	**0.005** [a]	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	**0.061**	**3.62** [ab]	**0.213**	**3.48** [ab]	**0.491** [b]	**8.48** [ab]	**0.042**	**4.05** [ab]	**0.117**	**0.115**	**0.02**

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Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-28 99 - 115 04/23/13 Plant 3	MW-13-29 76 - 80 04/23/13 Plant 3	MW-13-29 68 - 73 04/25/13 Plant 3	MW-13-30 79 - 83 04/24/13 Plant 3	MW-13-30 72 - 77 04/25/13 Plant 3	MW-13-37 67 - 72 10/17/13 Plant 3	MW-13-37 92 - 97 10/17/13 Plant 3	MW-13-38 77 - 82 10/16/13 Plant 3	MW-13-38 102 - 107 10/16/13 Plant 3	MW-13-39B 77 - 82 10/14/13 Plant 3	MW-13-39B 92 - 97 10/15/13 Plant 3
Volatile Organics																		
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	**130** [a]	**38**	<5	<5	<5	<5	**47**	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

Table 2
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RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-28 99 - 115 04/23/13 Plant 3	MW-13-29 76 - 80 04/23/13 Plant 3	MW-13-29 68 - 73 04/25/13 Plant 3	MW-13-30 79 - 83 04/24/13 Plant 3	MW-13-30 72 - 77 04/25/13 Plant 3	MW-13-37 67 - 72 10/17/13 Plant 3	MW-13-37 92 - 97 10/17/13 Plant 3	MW-13-38 77 - 82 10/16/13 Plant 3	MW-13-38 102 - 107 10/16/13 Plant 3	MW-13-39B 77 - 82 10/14/13 Plant 3	MW-13-39B 92 - 97 10/15/13 Plant 3
Semivolatile Organics																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1 J	<1	<1 J	<1	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	<1 J	<1	<1 J	<1	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	<1 J	<1	<1 J	<1	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	<1	<1	<1	<1 J	NA	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1 J	<1	<1 J	<1 J	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1 J	<1	<1 J	<1	NA	NA	NA	NA	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1 B	**1**	**2**	**13 J** [a]	<10 B	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1	**1 J**	<1	<1 J	**3**	NA	NA	NA	NA	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	<2	<2	<3	<2	NA	NA	NA	NA	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1	<1	<1	<1	**2**	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<2 B	**2**	<1	**2**	<2 B	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	<1	<1	<1	<1	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-28 99 - 115 04/23/13 Plant 3	MW-13-29 76 - 80 04/23/13 Plant 3	MW-13-29 68 - 73 04/25/13 Plant 3	MW-13-30 79 - 83 04/24/13 Plant 3	MW-13-30 72 - 77 04/25/13 Plant 3	MW-13-37 67 - 72 10/17/13 Plant 3	MW-13-37 92 - 97 10/17/13 Plant 3	MW-13-38 77 - 82 10/16/13 Plant 3	MW-13-38 102 - 107 10/16/13 Plant 3	MW-13-39B 77 - 82 10/14/13 Plant 3	MW-13-39B 92 - 97 10/15/13 Plant 3
Inorganics																		
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	<0.002	<0.002	<0.002	<0.002	<0.002	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	**0.021** [ab]	**0.007**	**0.005**	**0.037** [ab]	**0.002**	NA	NA	NA	NA	NA	NA
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	**0.088**	**0.094**	**0.056**	**0.465**	**0.095**	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	**0.15**	**0.19**	**0.79** [a]	**0.24**	**0.23**	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	<0.0010	**0.0006**	<0.0010	**0.0014**	<0.0010	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	<0.010	**0.04**	**0.01**	**0.008**	<0.010	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	<0.010	**0.008**	**0.016**	**0.033**	**0.006**	NA	NA	NA	NA	NA	NA
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	**0.002**	**0.024** [b]	**0.009**	**0.005**	**0.01**	NA	NA	NA	NA	NA	NA
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	<0.002	**0.018** [a]	**0.003**	<0.002	**0.002**	NA	NA	NA	NA	NA	NA
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	**0.045**	**1.8** [a]	**0.716** [a]	**14** [ab]	**1.3** [a]	NA	NA	NA	NA	NA	NA
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	<0.0001	<0.0001	<0.0001	**0.0014** [b]	<0.0001	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	**0.021**	**0.047**	**0.064**	**0.153** [ab]	**0.037**	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	**0.0007** [b]	**0.0014** [b]	<0.0005	**0.0012** [b]	<0.0005	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	<0.002	**0.007** [a]	**0.006** [a]	**0.002**	<0.002	NA	NA	NA	NA	NA	NA
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	**0.019**	**11.7** [ab]	**0.15**	**34.7** [ab]	**0.18**	NA	NA	NA	NA	NA	NA
Inorganics-Filtered																		
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	<0.002	<0.002	<0.002	<0.002	<0.002	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	**0.02** [ab]	<0.002	<0.002	**0.004**	<0.002	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	**0.077**	**0.041**	**0.021**	**0.068**	**0.085**	NA	NA	NA	NA	NA	NA
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	**0.15**	**0.2**	**0.75** [a]	**0.24**	**0.24**	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	NA	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	<0.010	<0.010	<0.010	<0.010	<0.010	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	<0.010	<0.010	**0.012**	<0.010	**0.006**	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	<0.002	**0.003**	**0.003**	<0.002	**0.004**	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	<0.002	<0.002	<0.002	<0.002	<0.002	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	**0.046**	**1.04** [a]	**0.328** [a]	**1.09** [a]	**1.28** [a]	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	**0.023**	**0.044**	**0.061**	**0.025**	**0.038**	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	<0.0005	**0.001** [b]	<0.0005	**0.0006** [b]	<0.0005	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	<0.002	<0.002	<0.002	<0.002	<0.002	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	**0.017**	**6.71** [ab]	**0.022**	**1.76** [b]	**0.192**	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-44 96 - 115 11/15/13 Plant 2	MW-13-47 99 - 119 11/15/13 Plant 3	MW-13-50 85 - 107 11/05/13 Plant 6	MW-91-6 82 - 98.5 04/04/13 Plant 3	SB-A5-LT95 5 - 10 03/28/13 Plant 2	SB-A5.4-LQ186 3 - 8 03/27/13 Plant 2	SB-A5.4-MA191 5 - 10 03/27/13 Plant 2	SB-A5.4-MA191* 5 - 10 03/28/13 Plant 2	SB-A7-TB192 3 - 8 03/28/13 Plant 6
Volatile Organics																
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	<5	<5 J	<5 J	<5 J	<5 J [<5 J]	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2 [<2]	<2

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-44 96 - 115 11/15/13 Plant 2	MW-13-47 99 - 119 11/15/13 Plant 3	MW-13-50 85 - 107 11/05/13 Plant 6	MW-91-6 82 - 98.5 04/04/13 Plant 3	SB-A5-LT95 5 - 10 03/28/13 Plant 2	SB-A5.4-LQ186 3 - 8 03/27/13 Plant 2	SB-A5.4-MA191 5 - 10 03/27/13 Plant 2	SB-A5.4-MA191* 5 - 10 03/28/13 Plant 2	SB-A7-TB192 3 - 8 03/28/13 Plant 6
Semivolatile Organics																
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<2 J	<1	<1	<1	<1 J [<1]	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	NA	NA	<2	**2**	<1 B	<1	**10 [a] [<1]**	<1
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	NA	NA	**8**	<1	<1	<1	<1 [<1]	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	NA	NA	<1	<2	<2	<2	<2 J [<2]	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	NA	NA	<2	<1	<1	<1	<1 J [<1]	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	NA	NA	<2	<1	<1	<1	<1 J [<1]	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	NA	NA	<1	<1 B	<1 B	<1	<1 B [<1]	<2 B
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	NA	NA	<1	<1	<1	<1	<1 J [<1]	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	NA	NA	<1	<1	<1 J	<1	**13 J [12 J]**	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	NA	NA	<1	<1	<1	<1	<1 [<1]	<1

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	MW-13-44 96 - 115 11/15/13 Plant 2	MW-13-47 99 - 119 11/15/13 Plant 3	MW-13-50 85 - 107 11/05/13 Plant 6	MW-91-6 82 - 98.5 04/04/13 Plant 3	SB-A5-LT95 5 - 10 03/28/13 Plant 2	SB-A5.4-LQ186 3 - 8 03/27/13 Plant 2	SB-A5.4-MA191 5 - 10 03/27/13 Plant 2	SB-A5.4-MA191* 5 - 10 03/28/13 Plant 2	SB-A7-TB192 3 - 8 03/28/13 Plant 6
Inorganics																
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	<0.002	<0.002	<0.002	<0.002	<0.002 [<0.002]	NA
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	**0.011** [ab]	**0.011** [ab]	<0.002	<0.002	<0.002 [<0.002]	NA
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	**0.129**	**0.922**	**0.022 J**	**0.059**	**0.082 [0.085 J]**	NA
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	**0.1**	**0.06**	**0.07**	**0.10**	**0.10 [0.10]**	NA
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	**0.0023**	<0.0010	<0.0010	<0.0010	<0.0010 [<0.001]	NA
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	<0.005	<0.010	<0.010	<0.010	<0.010 [<0.01]	NA
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	<0.010	<0.010	<0.010	<0.010	<0.010 [<0.01]	NA
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	**0.005**	**0.008**	**0.003**	<0.002	**0.006 [0.007]**	NA
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	**0.006** [a]	**0.034** [a]	<0.002 J	<0.002	**0.011** [a] **[0.013 J** [a]**]**	NA
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	**0.145** [a]	**1.43** [a]	**0.113 J** [a]	**0.226** [a]	**0.483** [a] **[0.547 J** [a]**]**	NA
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001 [<0.0001]	NA
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	<0.010	**0.093**	<0.010	<0.010	**0.017 [0.018]**	NA
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	<0.002	**0.033** [b]	<0.002	<0.002	<0.002 [0.004]	NA
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	<0.0002	**0.0002**	<0.0002	<0.0002	<0.0002 [<0.0002]	NA
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	<0.002	**0.012** [a]	<0.002	<0.002	**0.003 [0.004]**	NA
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	0.087	**0.026**	<0.010	<0.010	**0.018 [0.022]**	NA
Inorganics-Filtered																
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	<0.002	<0.002	NA	NA	<0.002 [<0.002]	<0.002
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	**0.01**	**0.002**	NA	NA	<0.002 [<0.002]	<0.002
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	**0.127**	**0.941**	NA	NA	**0.064 [0.061]**	**0.135**
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	**0.1**	**0.05**	NA	NA	**0.10 [0.09]**	**0.04**
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	<0.0010	<0.0010	NA	NA	<0.0010 [<0.001]	<0.0010
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	<0.005	<0.010	NA	NA	<0.010 [<0.01]	<0.010
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	<0.010	<0.010	NA	NA	<0.010 [<0.01]	<0.010
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	<0.002	<0.002	NA	NA	<0.002 [<0.002]	<0.002
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	<0.002	<0.002	NA	NA	<0.002 [<0.002]	<0.002
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	**0.142** [a]	**0.637** [a]	NA	NA	**0.154** [a] **[0.142** [a]**]**	**0.318** [a]
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	<0.0001	<0.0001	NA	NA	<0.0001 [<0.0001]	<0.0001
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	<0.010	**0.039**	NA	NA	**0.010 [<0.010]**	**0.011**
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	<0.002	**0.015** [b]	NA	NA	<0.002 [0.003]	**0.003**
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	<0.0002	<0.0002	NA	NA	<0.0002 [<0.0002]	<0.0002
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	<0.002	<0.002	NA	NA	<0.002 [<0.002]	<0.002
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	<0.010	<0.010	NA	NA	<0.010 [<0.01]	<0.010

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-JN55 67 - 72 08/01/13 Plant 2	VAP-P2-JO68 71 - 76 07/30/13 Plant 2	VAP-P2-JU88 77 - 82 07/29/13 Plant 2	VAP-P2-KH71 65 - 70 08/02/13 Plant 2	VAP-P2-KH71 70 - 75 08/02/13 Plant 2	VAP-P2-KK56 56 - 60 08/07/13 Plant 2	VAP-P2-KK56 70 - 72 08/07/13 Plant 2	VAP-P2-KL90 71 - 75 08/05/13 Plant 2
Volatile Organics															
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	**121** [a]	<5	<10 UB	**16**	<12 UB	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	**46**	**18**	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	**8** [a]	**12** [a]	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	**2**	**8**	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	**1**	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-JN55 67 - 72 08/01/13 Plant 2	VAP-P2-JO68 71 - 76 07/30/13 Plant 2	VAP-P2-JU88 77 - 82 07/29/13 Plant 2	VAP-P2-KH71 65 - 70 08/02/13 Plant 2	VAP-P2-KH71 70 - 75 08/02/13 Plant 2	VAP-P2-KK56 56 - 60 08/07/13 Plant 2	VAP-P2-KK56 70 - 72 08/07/13 Plant 2	VAP-P2-KL90 71 - 75 08/05/13 Plant 2
Semivolatile Organics															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-JN55 67 - 72 08/01/13 Plant 2	VAP-P2-JO68 71 - 76 07/30/13 Plant 2	VAP-P2-JU88 77 - 82 07/29/13 Plant 2	VAP-P2-KH71 65 - 70 08/02/13 Plant 2	VAP-P2-KH71 70 - 75 08/02/13 Plant 2	VAP-P2-KK56 56 - 60 08/07/13 Plant 2	VAP-P2-KK56 70 - 72 08/07/13 Plant 2	VAP-P2-KL90 71 - 75 08/05/13 Plant 2
Inorganics															
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered															
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-KP110 65 - 70 08/28/13 Plant 2	VAP-P2-KP110 77 - 82 08/28/13 Plant 2	VAP-P2-KV56 70 - 72 08/09/13 Plant 2	VAP-P2-KV73 68 - 72 08/06/13 Plant 2	VAP-P2-KW91 62 - 67 08/08/13 Plant 2	VAP-P2-KW91 79 - 82 08/08/13 Plant 2	VAP-P2-LG111 74 - 77 08/22/13 Plant 2	VAP-P2-LG111 80 - 82 08/22/13 Plant 2
Volatile Organics															
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	<5	<5	**18**	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	**22**	<10	<10	<10	<10	**15**	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	**2**	<1	**1**	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	**1**	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-KP110 65 - 70 08/28/13 Plant 2	VAP-P2-KP110 77 - 82 08/28/13 Plant 2	VAP-P2-KV56 70 - 72 08/09/13 Plant 2	VAP-P2-KV73 68 - 72 08/06/13 Plant 2	VAP-P2-KW91 62 - 67 08/08/13 Plant 2	VAP-P2-KW91 79 - 82 08/08/13 Plant 2	VAP-P2-LG111 74 - 77 08/22/13 Plant 2	VAP-P2-LG111 80 - 82 08/22/13 Plant 2
Semivolatile Organics															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-KP110 65 - 70 08/28/13 Plant 2	VAP-P2-KP110 77 - 82 08/28/13 Plant 2	VAP-P2-KV56 70 - 72 08/09/13 Plant 2	VAP-P2-KV73 68 - 72 08/06/13 Plant 2	VAP-P2-KW91 62 - 67 08/08/13 Plant 2	VAP-P2-KW91 79 - 82 08/08/13 Plant 2	VAP-P2-LG111 74 - 77 08/22/13 Plant 2	VAP-P2-LG111 80 - 82 08/22/13 Plant 2
Inorganics															
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered															
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-LN73 (67-72) 67 - 72 08/29/13 Plant 2	VAP-P2-LO91 72 - 77 08/26/13 Plant 2	VAP-P2-LY111 72 - 77 08/27/13 Plant 2	VAP-P2-MH82 67 - 72 08/30/13 Plant 2	VAP-P2-MI62 70 - 75 10/10/13 Plant 2	VAP-P2-MI101 72 - 77 08/28/13 Plant 2	VAP-P2-OS78 60 - 65 10/08/13 Plant 2	VAP-P2-OS78 70 - 75 10/08/13 Plant 2
Volatile Organics															
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<6 UB	**106** [a]	<5	**26**	<5	**55**	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	**44**	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	**28**	**13**	**13**	<10	**770 D** [a]	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	**1**	**1**	<1	<1	**113** [ah]	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	**13**	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	**7**	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	**1**	<1	<1	<1	**89**	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	**350 D**	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	**21**	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	**15**	<2	<2

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-LN73 (67-72) 67 - 72 08/29/13 Plant 2	VAP-P2-LO91 72 - 77 08/26/13 Plant 2	VAP-P2-LY111 72 - 77 08/27/13 Plant 2	VAP-P2-MH82 67 - 72 08/30/13 Plant 2	VAP-P2-MI62 70 - 75 10/10/13 Plant 2	VAP-P2-MI101 72 - 77 08/28/13 Plant 2	VAP-P2-OS78 60 - 65 10/08/13 Plant 2	VAP-P2-OS78 70 - 75 10/08/13 Plant 2
Semivolatile Organics															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-LN73 (67-72) 67 - 72 08/29/13 Plant 2	VAP-P2-LO91 72 - 77 08/26/13 Plant 2	VAP-P2-LY111 72 - 77 08/27/13 Plant 2	VAP-P2-MH82 67 - 72 08/30/13 Plant 2	VAP-P2-MI62 70 - 75 10/10/13 Plant 2	VAP-P2-MI101 72 - 77 08/28/13 Plant 2	VAP-P2-OS78 60 - 65 10/08/13 Plant 2	VAP-P2-OS78 70 - 75 10/08/13 Plant 2
Inorganics															
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered															
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-OS100 70 - 75 10/04/13 Plant 2	VAP-P2-OS120 72 - 77 10/07/13 Plant 2	VAP-P2-OU142 80 - 85 10/09/13 Plant 2	VAP-P2-PU122 62 - 70 10/21/13 Plant 2	VAP-P2-PU122 90 - 95 10/22/13 Plant 2	VAP-P2-PV76 80 - 85 10/23/13 Plant 2	VAP-P2-PV76 98 - 103 10/23/13 Plant 2	VAP-P2-PV101 65 - 70 10/17/13 Plant 2
Volatile Organics															
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	R	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	R	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	R	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	R	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	**196** [a]	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1 J	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10 J	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1 J	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	**53 J**	**60**	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1 J	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1 J	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1 J	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1 J	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1 J	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1 J	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1 J	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1 J	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1 J	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1 J	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1 J	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1 J	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1 J	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1 J	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1 J	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1 J	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1 J	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1 J	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1 J	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1 J	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	**25 J** [a]	**33** [a]	<1	<1	**2**	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10 J	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	**2 J**	**1**	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1 J	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	**1 J**	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	**13 J**	**12**	<1	<1	**1**	**2 J**	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1 J	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1 J	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1 J	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1 J	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	**21 J**	**22**	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10 J	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	R	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1 J	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	R	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1 J	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1 J	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1 J	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1 J	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	**2 J**	**2**	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	**3 J**	<2	<2	<2	<2	<2	<2	<2

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-OS100 70 - 75 10/04/13 Plant 2	VAP-P2-OS120 72 - 77 10/07/13 Plant 2	VAP-P2-OU142 80 - 85 10/09/13 Plant 2	VAP-P2-PU122 62 - 70 10/21/13 Plant 2	VAP-P2-PU122 90 - 95 10/22/13 Plant 2	VAP-P2-PV76 80 - 85 10/23/13 Plant 2	VAP-P2-PV76 98 - 103 10/23/13 Plant 2	VAP-P2-PV101 65 - 70 10/17/13 Plant 2
Semivolatile Organics															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-OS100 70 - 75 10/04/13 Plant 2	VAP-P2-OS120 72 - 77 10/07/13 Plant 2	VAP-P2-OU142 80 - 85 10/09/13 Plant 2	VAP-P2-PU122 62 - 70 10/21/13 Plant 2	VAP-P2-PU122 90 - 95 10/22/13 Plant 2	VAP-P2-PV76 80 - 85 10/23/13 Plant 2	VAP-P2-PV76 98 - 103 10/23/13 Plant 2	VAP-P2-PV101 65 - 70 10/17/13 Plant 2
Inorganics															
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered															
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA

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Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-PV101 89 - 94 10/18/13 Plant 2	VAP-P3-IC89 69.5 - 72.5 07/26/13 Plant 3	VAP-P3-IR43 69.5 - 73.5 07/25/13 Plant 3	VAP-P3-IS63 71 - 76 07/23/13 Plant 3	VAP-P3-IS63 66 - 71 07/30/13 Plant 3	VAP-P3-IS88 71 - 76 07/24/13 Plant 3	VAP-P6-QP71 79 - 87 10/17/13 Plant 6	VAP-P6-QV91 75 - 85 10/15/13 Plant 6
Volatile Organics															
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	**35**	**136** [a]	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	**1,730 D** [ab]	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	**1**	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	**190 D**	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-PV101 89 - 94 10/18/13 Plant 2	VAP-P3-IC89 69.5 - 72.5 07/26/13 Plant 3	VAP-P3-IR43 69.5 - 73.5 07/25/13 Plant 3	VAP-P3-IS63 71 - 76 07/23/13 Plant 3	VAP-P3-IS63 66 - 71 07/30/13 Plant 3	VAP-P3-IS88 71 - 76 07/24/13 Plant 3	VAP-P6-QP71 79 - 87 10/17/13 Plant 6	VAP-P6-QV91 75 - 85 10/15/13 Plant 6
Semivolatile Organics															
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	NA	NA	NA	NA	NA	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	NA	NA	NA	NA	NA	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P2-PV101 89 - 94 10/18/13 Plant 2	VAP-P3-IC89 69.5 - 72.5 07/26/13 Plant 3	VAP-P3-IR43 69.5 - 73.5 07/25/13 Plant 3	VAP-P3-IS63 71 - 76 07/23/13 Plant 3	VAP-P3-IS63 66 - 71 07/30/13 Plant 3	VAP-P3-IS88 71 - 76 07/24/13 Plant 3	VAP-P6-QP71 79 - 87 10/17/13 Plant 6	VAP-P6-QV91 75 - 85 10/15/13 Plant 6
Inorganics															
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered															
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P6-QV111 65 - 75 10/11/13 Plant 6	VAP-P6-QV131 80 - 85 10/11/13 Plant 6	VAP-P6-QV150 77 - 87 10/16/13 Plant 6
Volatile Organics										
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5 J	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	**17**
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11000	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1100	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P6-QV111 65 - 75 10/11/13 Plant 6	VAP-P6-QV131 80 - 85 10/11/13 Plant 6	VAP-P6-QV150 77 - 87 10/16/13 Plant 6
Semivolatile Organics										
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
2-Methyl-4,6-dinitrophenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1100	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(): Date Collected: Plant Number:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and	MI GW (DEQ2013) Non-Res GWVI	VAP-P6-QV111 65 - 75 10/11/13 Plant 6	VAP-P6-QV131 80 - 85 10/11/13 Plant 6	VAP-P6-QV150 77 - 87 10/16/13 Plant 6
Inorganics										
Antimony	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA
Arsenic	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA
Barium	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA
Boron	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA
Cadmium	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA
Chromium	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA
Cobalt	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA
Copper	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA
Lead	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA
Manganese	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA
Mercury	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA
Nickel	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA
Selenium	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA
Silver	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA
Vanadium	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA
Zinc	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA
Inorganics-Filtered										
Antimony (dissolved)	mg/L	0.006(A)	0.13(X)	NLV	NA	ID	- -	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01(A)	0.01	NLV	NA	ID	- -	NA	NA	NA
Barium (dissolved)	mg/L	2(A)	1.2(G)	NLV	NA	ID	- -	NA	NA	NA
Boron (dissolved)	mg/L	0.5(F)	7.2(X)	NLV	NA	ID	- -	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005(A)	0.0045(G,X)	NLV	NA	ID	- -	NA	NA	NA
Chromium Total	mg/L	0.1(A)	0.16(G,X)	NLV	NA	ID	- -	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	NLV	NA	ID	- -	NA	NA	NA
Copper (dissolved)	mg/L	1(E)	0.02(G)	NLV	NA	ID	- -	NA	NA	NA
Lead (dissolved)	mg/L	0.004(L)	0.044(G,X)	NLV	NA	ID	- -	NA	NA	NA
Manganese (dissolved)	mg/L	0.05(E)	4.5(G,X)	NLV	NA	ID	- -	NA	NA	NA
Mercury (dissolved)	mg/L	0.002(A)	0.0000013	0.056(S)	0.056	ID	- -	NA	NA	NA
Nickel (dissolved)	mg/L	0.1(A)	0.12(G)	NLV	NA	ID	- -	NA	NA	NA
Selenium (dissolved)	mg/L	0.05(A)	0.005	NLV	NA	ID	- -	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002(M)	NLV	NA	ID	- -	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	NLV	NA	ID	- -	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26(G)	NLV	NA	ID	- -	NA	NA	NA

Table 2
Summary of Groundwater Vertical Aquifer Profile (VAP) Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Table Notes:

-- Shading indicates result exceeding one or more MDEQ Part 201 Generic Cleanup Criteria and Screening Levels, Dated March 25, 2011.
-- Bold fonts represent data where detections were noted above the MDL but below MDEQ Part 201 Generic Cleanup Criteria.
-- Data shown in [ ] represent duplicate sample analytical results.
mg/L - milligrams per liter
µg/L - micrograms per liter
* - Location was resampled in order to collect duplicate and MS/MSD data
[a] - Sample exceeds Residential Drinking Water Criteria
[b] - Sample exceeds Groundwater Surface Water Interface Criteria
[c] - Sample exceeds Non-Residential Groundwater Volatilization to Indoor Air Inhalation Criteria
[e] - Sample exceeds Water Solubility Criteria
[e] - Sample exceeds Flammability and Explosivity Screening Levels
[f] - Sample exceeds Non-Residential Groundwater Concentrations for Vapor Intrusion

MDEQ Criteria Footnotes: (as revised September 28, 2012)

- - = Not listed in the MDEQ Criteria Tables.
ID = Insufficient data to develop a criterion.
Na = Not available.
NLV = Not likely to volatilize.
d = If the calculated criterion is below State of Michigan Safe Drinking Water Standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005, the criterion defaults to the Safe Drinking Water Standard.
A = Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
D = Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).
F = Criterion is based on adverse impacts to plant life and phytotoxicity.
G = Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. A hardness value of 257 mg/L was used.
L = Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.
M = Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
S = Criterion defaults to the hazardous substance-specific water solubility limit.
W = Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L.
X = The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.
AA = Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.

Lab and Validation Data Qualifiers:

B = Compounds also found in associated method blank
D = Compound quantified using a secondary dilution
E = Analyte exceeds calibration range
I = Matrix interference with internal standard
J = The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only.
K = Elevated reporting limits due to low total solids
N = Normal Sample
p = Benzo(b)fluoranthene and Benzo(k)fluoranthene integrated as one peak
R = Rejected
S = Surrogate recovery outside of control limits
T = No correction for total solids
UB = Compound considered non-detect at the listed value due to associated blank contamination.
UJ = The analyte was not detected above the quantitation limits, however the quantitation limits is estimated
U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
X = Elevated reporting limit due to matrix interference
z = Sample preserved in the lab

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-01(3) 55 - 65 06/03/13 Plant 3	MW-01(3) 55 - 65 08/21/13 Plant 3	MW-01(3) 55 - 65 11/14/13 Plant 3	MW-02-02(3) 74 - 84 05/28/13 Plant 3	MW-02-02(3) 74 - 84 08/20/13 Plant 3	MW-02-02(3) 74 - 84 11/12/13 Plant 3	MW-02-03(3) 79 - 89 05/29/13 Plant 3	MW-02-03(3) 79 - 89 08/19/13 Plant 3	MW-02-03(3) 79 - 89 11/07/13 Plant 3	MW-02-04(3) 76 - 86 05/21/13 Plant 3	MW-02-04(3) 76 - 86 08/19/13 Plant 3	MW-02-04(3) 76 - 86 11/07/13 Plant 3
Volatile Organics																			
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	<5	<5	<5	<5	<5 [<5]	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	**1**	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2 [<2]	<2	<2	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-01(3) 55 - 65 06/03/13 Plant 3	MW-01(3) 55 - 65 08/21/13 Plant 3	MW-01(3) 55 - 65 11/14/13 Plant 3	MW-02-02(3) 74 - 84 05/28/13 Plant 3	MW-02-02(3) 74 - 84 08/20/13 Plant 3	MW-02-02(3) 74 - 84 11/12/13 Plant 3	MW-02-03(3) 79 - 89 05/29/13 Plant 3	MW-02-03(3) 79 - 89 08/19/13 Plant 3	MW-02-03(3) 79 - 89 11/07/13 Plant 3	MW-02-04(3) 76 - 86 05/21/13 Plant 3	MW-02-04(3) 76 - 86 08/19/13 Plant 3	MW-02-04(3) 76 - 86 11/07/13 Plant 3
Semivolatile Organics																			
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1	**1**	<1	<1	<1	<1	<1	<1 [<1]	**1**	<1	<1	<1
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1	<1	<1	R	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	<2	<2	<2	<2	<2	<2	<2 [<2]	<2	<2	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1.1	<1	<2	<1	<1	<1	<1	<1 [<1]	<1	<1.1	<1	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<1	**5**	<1	<1	**5**	<1	<1	**5 [6]**	<1	<1	**6**	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	<1	<1	<1 J	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-01(3) 55 - 65 06/03/13 Plant 3	MW-01(3) 55 - 65 08/21/13 Plant 3	MW-01(3) 55 - 65 11/14/13 Plant 3	MW-02-02(3) 74 - 84 05/28/13 Plant 3	MW-02-02(3) 74 - 84 08/20/13 Plant 3	MW-02-02(3) 74 - 84 11/12/13 Plant 3	MW-02-03(3) 79 - 89 05/29/13 Plant 3	MW-02-03(3) 79 - 89 08/19/13 Plant 3	MW-02-03(3) 79 - 89 11/07/13 Plant 3	MW-02-04(3) 76 - 86 05/21/13 Plant 3	MW-02-04(3) 76 - 86 08/19/13 Plant 3	MW-02-04(3) 76 - 86 11/07/13 Plant 3
Inorganics																			
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005 [<0.005]	<0.005	<0.002	<0.005	<0.005
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.004**	**0.004**	**0.006**	**0.004**	**0.006**	**0.009**	**0.009**	**0.009 [0.009]**	**0.014** [ab]	**0.013** [ab]	**0.015** [ab]	**0.021** [ab]
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.097**	**0.097**	**0.099**	**0.063**	**0.099**	**0.096**	**0.695**	**0.712 [0.744]**	**0.979**	**0.157**	**0.167**	**0.161**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	<0.04	<0.04	<0.04	**0.04**	**0.06**	<0.04	<0.04	<0.04 [<0.04]	**0.04**	<0.04	<0.04	**0.04**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0010	<0.0005	<0.0005	<0.0010	<0.005	<0.0005	<0.0010	<0.005 [<0.005]	<0.0005	<0.0010	<0.005	<0.0005
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	<0.010	<0.005	<0.005	<0.010	<0.005	**0.009**	<0.010	<0.005 [<0.005]	**0.019**	<0.010	<0.005	<0.005
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	<0.01 J	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05 X
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.010	<0.005	<0.005	<0.010	**0.008**	**0.008**	<0.010	<0.005 [<0.005]	**0.010**	<0.010	**0.009**	**0.010**
Copper	mg/L	1	0.02	- -	- -	- -	- -	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005 [<0.005]	**0.010**	**0.038** [b]	<0.005	<0.005
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.002	<0.003	<0.003	<0.002	<0.003	<0.003	<0.002	<0.003 [<0.003]	**0.004**	<0.002	<0.003	<0.003
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.144** [a]	**0.153** [a]	**0.133** [a]	**2.13** [a]	**1.39** [a]	**1.10** [a]	**0.121** [a]	**0.113 [0.119]** [a]	**0.418** [a]	**0.069** [a]	**0.072** [a]	**0.076** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001 [<0.0001]	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	<0.010	**0.015**	**0.013**	**0.033**	**0.038**	**0.045**	**0.022**	**0.025 [0.026]**	**0.057**	**0.019**	**0.031**	**0.036**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005 [<0.005]	<0.005	<0.005	<0.005	**0.005**
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005 [<0.0005]	**0.0005** [b]	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.002	<0.005	<0.004	<0.002	<0.005	<0.004	<0.002	<0.005 [<0.005]	**0.006** [a]	<0.002	<0.005	<0.004
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	<0.010	**0.009**	**0.006**	**0.032**	**0.015**	**0.005**	<0.010	0.005 [<0.005]	**0.045**	**0.017**	**0.008**	**0.008**
Inorganics-Filtered																			
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	**2.95** [a]	NA	NA	**3.80** [a]	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	NA	NA	NA	**0.009**	NA	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.003	NA	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	**0.153** [a]	NA	NA	**1.33** [a]	NA	NA	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.004	NA	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-01(3) 55 - 65 06/03/13 Plant 3	MW-01(3) 55 - 65 08/21/13 Plant 3	MW-01(3) 55 - 65 11/14/13 Plant 3	MW-02-02(3) 74 - 84 05/28/13 Plant 3	MW-02-02(3) 74 - 84 08/20/13 Plant 3	MW-02-02(3) 74 - 84 11/12/13 Plant 3	MW-02-03(3) 79 - 89 05/29/13 Plant 3	MW-02-03(3) 79 - 89 08/19/13 Plant 3	MW-02-03(3) 79 - 89 11/07/13 Plant 3	MW-02-04(3) 76 - 86 05/21/13 Plant 3	MW-02-04(3) 76 - 86 08/19/13 Plant 3	MW-02-04(3) 76 - 86 11/07/13 Plant 3
General Chemistry																			
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	**323**	NA	NA	**410**	NA	NA	NA	NA	NA	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	**132**	NA	NA	**277**	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	<0.5	NA	NA	<0.5	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	**181**	NA	NA	**364** [a]	NA	NA	NA	NA	NA	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																			
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	NA	**1.444**	NA	NA	**3.321**	NA	NA	**4.080**	NA	NA	**3.944**	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	**1.120**	NA	NA	**4.355**	NA	NA	**3.931**	NA	NA	**3.299**	NA	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.54**	**0.21**	NA	**0.29**	**0.26**	NA	**0.22**	**0.23**	NA	**0.45**	**0.20**	NA
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**-88.50**	**-104.90**	NA	**-26.40**	**-55.50**	NA	**-82.30**	**-71.50**	NA	**-29.70**	**-79.80**	NA
pH	s.u.	- -	- -	- -	- -	- -	- -	**7.25**	**7.15**	NA	**6.54**	**6.29**	NA	**6.73**	**6.92**	NA	**8.43**	**7.00**	NA
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**17.25**	**24.54**	NA	**16.93**	**16.76**	NA	**16.80**	**15.44**	NA	**18.05**	**17.11**	NA
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**3.07**	**9.96**	NA	**7.68**	**8.08**	NA	**2.51**	**2.81**	NA	**5.05**	**8.78**	NA

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Volatile Organics																		
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5 [<5]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10 [<10]	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10 [<10]	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	**2 [2]**	**2**	**1**	<1	<1	<1	**2**	**1**	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	**15 [15]**	**16**	**10**	<1	<1	<1	**5**	**4**	**3**	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	**15 [15] [ab]**	**12 [a]**	**6 [a]**	**20 [ab]**	**15 [ab]**	**8 [a]**	**6 [a]**	**4 [a]**	**3 [a]**	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10 [<10]	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10 [<10]	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10 [<10]	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2 [<2]	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-04-02(3) 126 - 136 05/21/13 Plant 3	MW-04-02(3) 126 - 136 08/16/13 Plant 3	MW-04-02(3) 126 - 136 11/07/13 Plant 3	MW-04-03(3) 80 - 90 05/22/13 Plant 3	MW-04-03(3) 80 - 90 08/16/13 Plant 3	MW-04-03(3) 80 - 90 11/07/13 Plant 3	MW-04-04(3) 72 - 82 05/23/13 Plant 3	MW-04-04(3) 72 - 82 08/14/13 Plant 3	MW-04-04(3) 72 - 82 11/05/13 Plant 3	MW-04-04R 82 - 110 08/23/13 Plant 6	MW-04-04R 82 - 110 11/12/13 Plant 6
Semivolatile Organics																		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	1 [<1]	<1	<1	<1	<1	**1**	**1**	<1	<1	<1	<1
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2 [<2]	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<1 [<1]	**6**	<1	<1	**8**	<1	<1	**4**	<1	**5 B**	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1 [<1]	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-04-02(3) 126 - 136 05/21/13 Plant 3	MW-04-02(3) 126 - 136 08/16/13 Plant 3	MW-04-02(3) 126 - 136 11/07/13 Plant 3	MW-04-03(3) 80 - 90 05/22/13 Plant 3	MW-04-03(3) 80 - 90 08/16/13 Plant 3	MW-04-03(3) 80 - 90 11/07/13 Plant 3	MW-04-04(3) 72 - 82 05/23/13 Plant 3	MW-04-04(3) 72 - 82 08/14/13 Plant 3	MW-04-04(3) 72 - 82 11/05/13 Plant 3	MW-04-04R 82 - 110 08/23/13 Plant 6	MW-04-04R 82 - 110 11/12/13 Plant 6
Inorganics																		
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.002 [<0.002]	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.005	<0.005
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.007 [0.007]**	**0.009**	**0.008**	<0.002	**0.003**	**0.003**	**0.011** [ab]	**0.012** [ab]	**0.011** [ab]	**0.019** [ab]	**0.021** [ab]
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.108 [0.104]**	**0.093**	**0.096**	**0.187**	**0.194**	**0.191**	**0.091**	**0.087**	**0.096**	**0.435**	**0.414**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.31 [0.33]**	**0.308**	**0.28**	**0.44**	**0.421**	**0.46**	**0.32**	**0.329**	**0.33**	**0.04**	**0.04**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0010 [<0.001]	<0.005	<0.0005	<0.0010	<0.005	<0.0005	<0.0010	<0.005	<0.0005	<0.0005	<0.0005
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	<0.010 [<0.01]	<0.005	<0.005	<0.010	**0.011**	**0.083**	<0.010	<0.005	<0.005	<0.005	**0.010**
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.010 [<0.01]	<0.005	<0.005	<0.010	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005
Copper	mg/L	1	0.02	- -	- -	- -	- -	<0.002 [<0.002]	**0.073** [b]	<0.005	**0.009**	**0.006**	**0.006**	**0.014**	**0.010**	<0.005	<0.005	**0.007**
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.002 [<0.002]	<0.003	<0.003	<0.002	<0.003	<0.003	<0.002	<0.003	<0.003	<0.003	<0.003
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.326 [0.336]** [a]	**0.312** [a]	**0.265** [a]	**0.168** [a]	**0.173** [a]	**0.204** [a]	**0.447** [a]	**0.446** [a]	**0.434** [a]	**0.051** [a]	**0.048**
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001 [<0.0001]	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.013 [0.012]**	**0.011**	**0.013**	**0.013**	**0.020**	**0.100**	<0.010	**0.015**	**0.013**	**0.017**	**0.016**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005 [<0.0005]	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.002 [<0.002]	<0.005	<0.004	<0.002	<0.005	<0.004	<0.002	<0.005	<0.004	<0.005	<0.004
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	**0.020 [0.023]**	**0.006**	**0.106**	**0.016**	<0.005	**0.012**	**0.010**	<0.005	**0.008**	<0.005	**0.005**
Inorganics-Filtered																		
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	**4.13** [a]	NA	**5.36** [a]	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	<0.005
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.002	NA	NA	**0.012** [ab]	**0.020** [ab]	**0.020** [ab]
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	NA	NA	NA	**0.190**	NA	NA	NA	**0.432**	**0.401**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.04**	**0.04**
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.0005	NA	NA	NA	<0.0005	<0.0005
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	<0.005
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	<0.005
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	<0.005
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.003	NA	NA	<0.003	<0.003	<0.003
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	NA	NA	NA	NA	**0.182** [a]	NA	**0.444** [a]	NA	**0.038**	**0.021**
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	NA	NA	NA	<0.0001	NA	NA	NA	<0.0001	<0.0001
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	NA	NA	NA	**0.038**	NA	NA	NA	**0.015**	**0.018**
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	<0.005
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.0005	NA	NA	NA	<0.0005	<0.0005
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.004	NA	NA	<0.004	<0.005	<0.004
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	<0.005	**0.012**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-04-02(3) 126 - 136 05/21/13 Plant 3	MW-04-02(3) 126 - 136 08/16/13 Plant 3	MW-04-02(3) 126 - 136 11/07/13 Plant 3	MW-04-03(3) 80 - 90 05/22/13 Plant 3	MW-04-03(3) 80 - 90 08/16/13 Plant 3	MW-04-03(3) 80 - 90 11/07/13 Plant 3	MW-04-04(3) 72 - 82 05/23/13 Plant 3	MW-04-04(3) 72 - 82 08/14/13 Plant 3	MW-04-04(3) 72 - 82 11/05/13 Plant 3	MW-04-04R 82 - 110 08/23/13 Plant 6	MW-04-04R 82 - 110 11/12/13 Plant 6
General Chemistry																		
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	**384**	NA	**406**	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	**119**	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	<0.5	NA	<0.5	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	**180**	NA	**51**	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																		
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	NA	**1.354**	NA	NA	**1.478**	NA	NA	**1.473**	NA	**1.126**	**1.444**
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	**1.259**	NA	NA	**1.160**	NA	NA	**1.167**	NA	NA	NA	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.40**	**0.17**	NA	**0.56**	**0.24**	NA	**1.25**	**0.21**	NA	**1.06**	**1.87**
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**-46.90**	**-69.50**	NA	**-28.60**	**-71.50**	NA	**16.1**	**-71.90**	NA	**-58.10**	**-73.3**
pH	s.u.	- -	- -	- -	- -	- -	- -	**6.78**	**6.99**	NA	**8.62**	**6.94**	NA	**7.77**	**6.75**	NA	**7.02**	**6.97**
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**14.63**	**13.63**	NA	**15.38**	**14.30**	NA	**12.57**	**16.22**	NA	**21.93**	**11.81**
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**5.97**	**1.94**	NA	**7.75**	**5.61**	NA	**0.38**	**6.69**	NA	**65.5**	**23.55**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-04-06R 74 - 99.5 08/23/13 Plant 6	MW-04-06R 74 - 99.5 11/07/13 Plant 6	MW-12-01 87 - 110 08/20/13 Plant 2	MW-12-01 87 - 110 11/07/13 Plant 2	MW-12-02 87 - 110 05/29/13 Plant 2	MW-12-02 87 - 110 08/14/13 Plant 2	MW-12-02 87 - 110 11/05/13 Plant 2	MW-12-05 75 - 99 06/11/13 Plant 2	MW-12-05 75 - 99 06/11/13 Plant 2	MW-12-05 75 - 99 08/21/13 Plant 2	MW-12-05 75 - 99 11/11/13 Plant 2	MW-12-06 80.6 - 99.5 06/12/13 Plant 2	MW-12-06 80.6 - 99.5 08/21/13 Plant 2
Volatile Organics																				
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5 [<5]	<5	<5 [<5]	<5	<5	<5	<5	NA	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10 [<10]	<10	<10 [<10]	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10 [<10]	<10	<10 [<10]	<10	<10	<10	<10	NA	<10	<10	<10	<10	**10**
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10 [<10]	<10	<10 [<10]	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1 J	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10 [<10]	<10	<10 [<10]	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10 [<10]	<10	<10 [<10]	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1 J	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2 [<2]	<2	<2 [<2]	<2	<2	<2	<2	NA	<2	<2	<2 J	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-04-06R 74 - 99.5 08/23/13 Plant 6	MW-04-06R 74 - 99.5 11/07/13 Plant 6	MW-12-01 87 - 110 08/20/13 Plant 2	MW-12-01 87 - 110 11/07/13 Plant 2	MW-12-02 87 - 110 05/29/13 Plant 2	MW-12-02 87 - 110 08/14/13 Plant 2	MW-12-02 87 - 110 11/05/13 Plant 2	MW-12-05 75 - 99 06/11/13 Plant 2	MW-12-05 75 - 99 06/11/13 Plant 2	MW-12-05 75 - 99 08/21/13 Plant 2	MW-12-05 75 - 99 11/11/13 Plant 2	MW-12-06 80.6 - 99.5 06/12/13 Plant 2	MW-12-06 80.6 - 99.5 08/21/13 Plant 2
Semivolatile Organics																				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1 [<1]	<1	**2 [1]**	<1	<1	<1	<1	NA	<1	<1	<1	**1**	**1**
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2 [<2]	<2	<2 [<2]	<2	<2	<2	<2	NA	<2	<2	<2	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<2	<1	<1	<2	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	**8 B [6 B]**	<1	**6 [4]**	<1	<1	**9**	<1	NA	**3**	**6**	<1	**2**	**6**
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	**1**	<1	<1	<1	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<2	<1	<1	<2
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1 [<1]	<1	<1 [<1]	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-04-06R 74 - 99.5 08/23/13 Plant 6	MW-04-06R 74 - 99.5 11/07/13 Plant 6	MW-12-01 87 - 110 08/20/13 Plant 2	MW-12-01 87 - 110 11/07/13 Plant 2	MW-12-02 87 - 110 05/29/13 Plant 2	MW-12-02 87 - 110 08/14/13 Plant 2	MW-12-02 87 - 110 11/05/13 Plant 2	MW-12-05 75 - 99 06/11/13 Plant 2	MW-12-05 75 - 99 06/11/13 Plant 2	MW-12-05 75 - 99 08/21/13 Plant 2	MW-12-05 75 - 99 11/11/13 Plant 2	MW-12-06 80.6 - 99.5 06/12/13 Plant 2	MW-12-06 80.6 - 99.5 08/21/13 Plant 2
Inorganics																				
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005 [<0.005]	<0.005	<0.002	<0.005	<0.005	NA	<0.002	<0.005	<0.005	<0.002	<0.005
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.022 [0.023]** [ab]	**0.021** [ab]	**0.010 [0.01]**	**0.010**	**0.008**	**0.013** [ab]	**0.007**	NA	<0.002	<0.002	<0.002	**0.007**	**0.002**
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.412 [0.403]**	**0.381**	**0.075 [0.071]**	**0.058**	**0.171**	**0.219**	**0.181**	NA	**0.029**	**0.034**	**0.034**	**0.052**	**0.050**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.05 [0.05]**	**0.05**	**0.12 [0.13]**	**0.13**	**0.06**	**0.071**	**0.08**	NA	**0.05**	**0.07**	**0.07**	**0.19**	**0.22**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0005 [<0.0005]	<0.0005	<0.005 [<0.005]	<0.0005	<0.0010	<0.005	<0.0005	NA	<0.0010	<0.0005	<0.0005	<0.0010	<0.0005
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	**0.007 [0.007]**	**0.015**	**0.019 [0.018]**	<0.005	<0.010	<0.005	<0.005	NA	<0.010	**0.006**	<0.005	<0.010	**0.005**
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005 [<0.005]	<0.005	<0.010	<0.005	<0.005	NA	<0.010	<0.005	<0.005	<0.010	<0.005
Copper	mg/L	1	0.02	- -	- -	- -	- -	**0.009 [0.009]**	**0.019**	**0.011 [0.012]**	<0.005	**0.010**	<0.005	<0.005	NA	**0.012**	**0.009**	**0.006**	<0.002	**0.007**
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003 [<0.003]	<0.003	**0.004 [0.003]**	<0.003	<0.002	<0.003	<0.003	NA	<0.002	<0.003	<0.003	<0.002	**0.004**
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.109 [0.106]** [a]	**0.123** [a]	**0.118 [0.114]** [a]	**0.264** [a]	**0.252** [a]	**0.127** [a]	**0.304** [a]	NA	**0.100** [a]	**0.076** [a]	**0.091** [a]	**0.040**	**0.100** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001 [<0.0001]	<0.0001	<0.0001 [<0.0001]	<0.0001	<0.0001	<0.0001	<0.0001	NA	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.031 [0.03]**	**0.060**	**0.019 [0.019]**	**0.016**	<0.010	**0.010**	**0.008**	NA	**0.040**	**0.044**	**0.038**	**0.012**	**0.011**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005 [<0.005]	**0.006** [b]	<0.005 [0.005]	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005 [<0.0005]	<0.0005	<0.0005 [<0.0005]	<0.0005	<0.0005	<0.0005	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.005 [<0.005]	<0.004	**0.007 [0.015]** [a]	<0.004	<0.002	<0.005	<0.004	NA	<0.002	<0.005	<0.004	<0.002	<0.005
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	**0.010 [0.009]**	**0.006**	**0.052 [0.048]**	<0.005	<0.010	**0.016**	<0.005	NA	**0.019**	**0.008**	**0.006**	<0.010	**0.013**
Inorganics-Filtered																				
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	**6.93** [a]	NA	**10.2 [10.5]** [a]	NA	NA	**5.45** [a]	NA	NA	NA	**8.00** [a]	NA	NA	**15.6** [a]
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005 [<0.005]	<0.005	NA	NA	NA	**0.003**	<0.002	<0.005	NA	NA	<0.005
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	**0.023 [0.022]** [ab]	**0.021** [ab]	**0.010 [0.01]**	**0.008**	NA	NA	**0.007**	<0.002	<0.002	<0.002	NA	NA	<0.002
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	**0.382 [0.386]**	**0.379**	**0.059 [0.059]**	**0.053**	NA	NA	NA	**0.031**	**0.030**	**0.034**	NA	NA	**0.043**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.05 [0.05]**	**0.05**	**0.12 [0.12]**	**0.13**	NA	NA	NA	**0.05**	**0.06**	**0.07**	NA	NA	**0.24**
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0005 [<0.0005]	<0.0005	<0.005 [<0.005]	<0.0005	NA	NA	NA	<0.0010	<0.0010	<0.0005	NA	NA	<0.0005
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005 [<0.005]	<0.005	NA	NA	NA	<0.010	<0.010	<0.005	NA	NA	<0.005
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005 [<0.005]	<0.005	NA	NA	NA	<0.010	<0.010	<0.005	NA	NA	<0.005
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005 [<0.005]	<0.005	NA	NA	NA	**0.008**	**0.006**	<0.005	NA	NA	<0.005
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003 [<0.003]	<0.003	<0.003 [<0.003]	<0.003	NA	NA	<0.003	<0.002	<0.002	<0.003	NA	NA	<0.003
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	**0.052 [0.052]** [a]	**0.117** [a]	**0.094 [0.095]** [a]	**0.255** [a]	NA	**0.125** [a]	NA	**0.103** [a]	**0.099** [a]	**0.075** [a]	NA	NA	**0.090** [a]
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001 [<0.0001]	<0.0001	<0.0001 [<0.0001]	<0.0001	NA	NA	NA	<0.0001	<0.0001	<0.0001	NA	NA	<0.0001
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	**0.026 [0.03]**	**0.051**	**0.012 [0.014]**	**0.016**	NA	NA	NA	**0.041**	**0.042**	**0.045**	NA	NA	**0.008**
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005 [0.005]	<0.005	NA	NA	NA	<0.005	<0.005	<0.005	NA	NA	<0.005
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005 [<0.0005]	<0.0005	<0.0005 [<0.0005]	<0.0005	NA	NA	NA	<0.0005	<0.0005	<0.0005	NA	NA	<0.0005
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.005 [<0.005]	<0.004	<0.005 [<0.005]	<0.004	NA	NA	<0.004	<0.002	<0.002	<0.005	NA	NA	<0.005
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	<0.005 [<0.005]	**0.008**	<0.005 [<0.005]	<0.005	NA	NA	NA	**0.017**	**0.021**	**0.008**	NA	NA	**0.006**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-04-06R 74 - 99.5 08/23/13 Plant 6	MW-04-06R 74 - 99.5 11/07/13 Plant 6	MW-12-01 87 - 110 08/20/13 Plant 2	MW-12-01 87 - 110 11/07/13 Plant 2	MW-12-02 87 - 110 05/29/13 Plant 2	MW-12-02 87 - 110 08/14/13 Plant 2	MW-12-02 87 - 110 11/05/13 Plant 2	MW-12-05 75 - 99 06/11/13 Plant 2	MW-12-05 75 - 99 06/11/13 Plant 2	MW-12-05 75 - 99 08/21/13 Plant 2	MW-12-05 75 - 99 11/11/13 Plant 2	MW-12-06 80.6 - 99.5 06/12/13 Plant 2	MW-12-06 80.6 - 99.5 08/21/13 Plant 2
General Chemistry																				
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	**375**	NA	**322 [325]**	NA	NA	**408**	NA	NA	NA	**414**	NA	NA	**415**
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**197 [182]**	NA	NA	**140**	NA	NA	NA	**220**	NA	NA	**221**
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	<0.5	NA	<0.5 [<0.5]	NA	NA	<0.5	NA	NA	NA	<0.5	NA	NA	<0.5
Sulfate	mg/L	250	- -	- -	- -	- -	- -	**113**	NA	**182 [183]**	NA	NA	**142**	NA	NA	NA	**1,350** [a]	NA	NA	**22**
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																				
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	**2.595**	**4.899**	**1.844**	NA	NA	**1.255**	NA	NA	NA	**2.726**	NA	NA	**0.757**
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**1.160**	NA	NA	NA	**2.729**	NA	NA	**0.772**	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**0.17**	NA	NA	**0.26**	NA	NA	NA	**0.69**	NA	NA	**0.32**
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.12**	**2.25**	NA	NA	**0.28**	NA	NA	NA	**0.37**	NA	NA	**0.52**	NA
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**-108.20**	**-133.6**	**-115.90**	NA	NA	**-80.70**	NA	NA	**-19.40**	**-64.50**	NA	**-67.20**	**-138.20**
pH	s.u.	- -	- -	- -	- -	- -	- -	**7.20**	**7.15**	**7.16**	NA	NA	**7.01**	NA	NA	**6.77**	**6.93**	NA	**6.77**	**7.20**
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**17.34**	**13.98**	**19.47**	NA	**15.60**	**17.05**	NA	NA	**19.10**	**28.18**	NA	**16.21**	**28.11**
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**210**	**21.32**	**166**	NA	**8.20**	**4.41**	NA	NA	**32.3**	**36.6**	NA	**7.20**	**109**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-12-06 80.6 - 99.5 11/08/13 Plant 2	MW-12-12 13 - 18 06/12/13 Plant 6	MW-12-12 13 - 18 08/15/13 Plant 6	MW-12-12 13 - 18 11/08/13 Plant 6	MW-12-13 18.5 - 23.5 05/30/13 Plant 6	MW-12-13 18.5 - 23.5 08/19/13 Plant 6	MW-12-13 18.5 - 23.5 11/08/13 Plant 6	MW-12-15 18 - 23 05/24/13 Plant 6	MW-12-15 18 - 23 08/20/13 Plant 6	MW-12-15 18 - 23 11/06/13 Plant 6	MW-12-16 28 - 33 05/23/13 Plant 6	MW-12-16 28 - 33 08/20/13 Plant 6	MW-12-16 28 - 33 11/05/13 Plant 6	MW-12-20 75 - 80 05/24/13 Plant 3
Volatile Organics																					
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-12-06 80.6 - 99.5 11/08/13 Plant 2	MW-12-12 13 - 18 06/12/13 Plant 6	MW-12-12 13 - 18 08/15/13 Plant 6	MW-12-12 13 - 18 11/08/13 Plant 6	MW-12-13 18.5 - 23.5 05/30/13 Plant 6	MW-12-13 18.5 - 23.5 08/19/13 Plant 6	MW-12-13 18.5 - 23.5 11/08/13 Plant 6	MW-12-15 18 - 23 05/24/13 Plant 6	MW-12-15 18 - 23 08/20/13 Plant 6	MW-12-15 18 - 23 11/06/13 Plant 6	MW-12-16 28 - 33 05/23/13 Plant 6	MW-12-16 28 - 33 08/20/13 Plant 6	MW-12-16 28 - 33 11/05/13 Plant 6	MW-12-20 75 - 80 05/24/13 Plant 3
Semivolatile Organics																					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1	<1	**1**	<1	<1	**1**	<1	**2**	<1	**4**	**3**	<1	<1	**1**
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1	<1	<1	<1	**3**	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<1	**3**	**18**	<1	<1	**6**	<1	<1	**2**	<1	<1	**7**	<1	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	<1	**1**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	<1	<1	**1**	<1	<1	**1**	<1	<1	<1	<1	<1	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-12-06 80.6 - 99.5 11/08/13 Plant 2	MW-12-12 13 - 18 06/12/13 Plant 6	MW-12-12 13 - 18 08/15/13 Plant 6	MW-12-12 13 - 18 11/08/13 Plant 6	MW-12-13 18.5 - 23.5 05/30/13 Plant 6	MW-12-13 18.5 - 23.5 08/19/13 Plant 6	MW-12-13 18.5 - 23.5 11/08/13 Plant 6	MW-12-15 18 - 23 05/24/13 Plant 6	MW-12-15 18 - 23 08/20/13 Plant 6	MW-12-15 18 - 23 11/06/13 Plant 6	MW-12-16 28 - 33 05/23/13 Plant 6	MW-12-16 28 - 33 08/20/13 Plant 6	MW-12-16 28 - 33 11/05/13 Plant 6	MW-12-20 75 - 80 05/24/13 Plant 3
Inorganics																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.004**	**0.003**	<0.002	**0.009**	<0.002	**0.004**	**0.003**	**0.002**	**0.004**	<0.002	**0.011** [ab]	**0.015** [ab]	**0.015** [ab]	<0.002
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.064**	**0.073**	**0.095**	**0.116**	**0.158**	**0.155**	**0.161**	**0.048**	**0.289**	**0.297**	**0.213**	**0.203**	**0.213**	**0.129**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.19**	**0.04**	**0.05**	**0.07**	**0.04**	**0.04**	**0.05**	**0.11**	**0.05**	**0.05**	**0.06**	**0.08**	**0.08**	**0.07**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0005	<0.0010	<0.005	<0.0005	<0.0010	<0.005	<0.0005	<0.0010	<0.005	<0.0005	<0.0010	<0.005	<0.0005	<0.0010
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	<0.005	<0.010	**0.009**	**0.232** [ab]	<0.010	<0.005	<0.005	<0.010	**0.006**	**0.007**	<0.010	<0.005	<0.005	<0.010
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005	<0.010	**0.010**	**0.014**	<0.010	<0.005	<0.005	<0.010	<0.005	<0.005	<0.010	<0.005	<0.005	<0.010
Copper	mg/L	1	0.02	- -	- -	- -	- -	<0.005	**0.005**	<0.005	**0.016**	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	**0.020**
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003	**0.002**	<0.003	**0.003**	<0.002	<0.003	<0.003	<0.002	<0.003	<0.003	<0.002	<0.003	<0.003	<0.002
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.066** [a]	**0.106** [a]	**0.320** [a]	**0.452** [a]	**0.131** [a]	**0.128** [a]	**0.132** [a]	**0.020**	**0.335** [a]	**0.338** [a]	**0.345** [a]	**0.318** [a]	**0.308** [a]	**0.138** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.006**	**0.035**	**0.062**	**0.268** [ab]	**0.014**	**0.011**	**0.015**	**0.010**	**0.011**	**0.020**	**0.013**	**0.013**	**0.016**	**0.013**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.004	<0.002	<0.005	<0.004	<0.002	<0.005	<0.004	<0.002	**0.005** [a]	**0.004**	<0.002	<0.005	<0.004	<0.002
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	<0.005	**0.014**	**0.014**	**0.022**	<0.010	<0.005	**0.011**	**0.023**	<0.005	**0.005**	**0.013**	**0.005**	**0.005**	**0.020**
Inorganics-Filtered																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	**0.84** [a]	NA	NA	**2.60** [a]	NA	NA	**10.1** [a]	NA	NA	**6.10** [a]	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	<0.002	<0.005	<0.005	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	**0.002**	**0.002**	**0.004**	NA	NA	NA	NA	**0.003**	<0.002	NA	NA	**0.015** [ab]	NA
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	**0.069**	**0.093**	**0.087**	NA	NA	NA	NA	**0.296**	NA	NA	NA	NA	NA
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	**0.04**	**0.05**	**0.07**	NA	NA	NA	NA	**0.05**	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	<0.0010	<0.005	<0.0005	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	<0.010	<0.005	<0.005	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	<0.010	**0.008**	**0.007**	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	**0.003**	<0.005	<0.005	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	<0.002	<0.003	<0.003	NA	NA	NA	NA	<0.003	<0.003	NA	NA	<0.003	NA
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	**0.081** [a]	**0.263** [a]	**0.284** [a]	NA	**0.129** [a]	NA	NA	**0.335** [a]	NA	NA	**0.310** [a]	NA	NA
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	<0.0001	<0.0001	<0.0001	NA	NA	NA	NA	<0.0001	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	0.032	0.056	**0.152** [ab]	NA	NA	NA	NA	**0.012**	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	<0.005	<0.005	<0.005	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	<0.0005	<0.0005	<0.0005	NA	NA	NA	NA	<0.0005	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	<0.002	<0.005	<0.004	NA	NA	NA	NA	<0.005	<0.004	NA	NA	<0.004	NA
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	**0.010**	**0.008**	**0.006**	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-12-06 80.6 - 99.5 11/08/13 Plant 2	MW-12-12 13 - 18 06/12/13 Plant 6	MW-12-12 13 - 18 08/15/13 Plant 6	MW-12-12 13 - 18 11/08/13 Plant 6	MW-12-13 18.5 - 23.5 05/30/13 Plant 6	MW-12-13 18.5 - 23.5 08/19/13 Plant 6	MW-12-13 18.5 - 23.5 11/08/13 Plant 6	MW-12-15 18 - 23 05/24/13 Plant 6	MW-12-15 18 - 23 08/20/13 Plant 6	MW-12-15 18 - 23 11/06/13 Plant 6	MW-12-16 28 - 33 05/23/13 Plant 6	MW-12-16 28 - 33 08/20/13 Plant 6	MW-12-16 28 - 33 11/05/13 Plant 6	MW-12-20 75 - 80 05/24/13 Plant 3
General Chemistry																					
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**426**	NA	NA	**267**	NA	NA	**560**	NA	NA	**535**	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**130**	NA	NA	**106**	NA	NA	**312**	NA	NA	**287**	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	NA	**1.1**	NA	NA	<0.5	NA	NA	<0.5	NA	NA	<0.5	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	NA	**183**	NA	NA	**131**	NA	NA	**8**	NA	NA	**189**	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																					
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	**3.540**	**5.261**	NA	**1.222**	**1.745**	NA	**1.119**	**1.599**	NA	**1.840**	**2.474**	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	**2.965**	NA	NA	**1.447**	NA	NA	**1.268**	NA	NA	**2.183**	NA	NA	**1.227**
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	NA	**1.12**	**0.43**	**3.42**	**0.50**	**0.21**	**1.92**	**0.22**	**0.07**	**1.87**	**0.34**	**0.63**	**2.30**	**2.56**
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	NA	**474.3**	**-3.60**	**-52.3**	**-14.90**	**-113.40**	**-125.5**	**-68.00**	**-73.80**	**-90.3**	**-58.00**	**-55.50**	**-79.7**	**-94.70**
pH	s.u.	- -	- -	- -	- -	- -	- -	NA	**7.71**	**7.0**	**6.92**	**7.38**	**7.22**	**7.27**	**7.05**	**6.85**	**6.97**	**7.03**	**6.89**	**6.89**	**7.07**
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	NA	**20.14**	**23.40**	**9.81**	**25.68**	**25.68**	**12.50**	**10.92**	**20.22**	**15.24**	**12.78**	**18.35**	**14.78**	**13.74**
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	NA	**21**	**125.6**	**114.3**	**9**	**10.9**	**9.73**	**2**	**32.6**	**5.21**	**3**	**5.9**	**1.44**	**56.9**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-12-20 75 - 80 05/31/13 Plant 3	MW-12-20 75 - 80 08/15/13 Plant 3	MW-12-20 75 - 80 11/08/13 Plant 3	MW-12-20 70 - 75 02/08/13 Plant 3	MW-12-21 70 - 75 02/14/13 Plant 3	MW-12-21 70 - 75 06/06/13 Plant 3	MW-12-21 70 - 75 08/19/13 Plant 3	MW-12-21 70 - 75 11/11/13 Plant 3	MW-13-22 89 - 94 04/02/13 Plant 3	MW-13-22 89 - 94 05/31/13 Plant 3	MW-13-22 89 - 94 08/19/13 Plant 3	MW-13-22 89 - 94 11/11/13 Plant 3	MW-13-22 89 - 94 12/18/13 Plant 3	MW-13-23 69 - 74 04/02/13 Plant 3
Volatile Organics																					
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	NA	<5	<5	<5	**460 Y [a]**	**510 Y [a]**	**450 Y [a]**	**500 Y [a]**	**52**	**112 [a]**	**240 Y [a]**	**270 Y [a]**	NA	**14**
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	NA	<10	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	NA	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	NA	<10	<10	<10	NA	<10	**10**	<10	<10	<10	<10	<10	NA	**20**
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	NA	<10	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	NA	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	NA	<1	<1	<1	NA	**2**	<1	<1	<1	<1	<1	<1	NA	**2**
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	NA	<10	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	NA	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	NA	<10	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	NA	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	NA	<1	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	NA	<1	**1**	<1	NA	<1	<1	<1	<1	<1	<1	<1	NA	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	NA	<2	<2	<2	NA	<2	<2	<2	<2	<2	<2	<2	NA	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-12-20 75 - 80 05/31/13 Plant 3	MW-12-20 75 - 80 08/15/13 Plant 3	MW-12-20 75 - 80 11/08/13 Plant 3	MW-12-20 70 - 75 02/08/13 Plant 3	MW-12-21 70 - 75 02/14/13 Plant 3	MW-12-21 70 - 75 06/06/13 Plant 3	MW-12-21 70 - 75 08/19/13 Plant 3	MW-12-21 70 - 75 11/11/13 Plant 3	MW-13-22 89 - 94 04/02/13 Plant 3	MW-13-22 89 - 94 05/31/13 Plant 3	MW-13-22 89 - 94 08/19/13 Plant 3	MW-13-22 89 - 94 11/11/13 Plant 3	MW-13-22 89 - 94 12/18/13 Plant 3	MW-13-23 69 - 74 04/02/13 Plant 3
Semivolatile Organics																					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1 J	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	**1**	<1	**2**	NA	**1**	<1	<1	NA	<1	**1**	<1	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	<2	<2	<2	NA	<2	<2	<2	NA	<2	<2	<2	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	<1	<1	**31**	NA	<1	<1	<1	NA	<1.1	<1	<1	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	**7**	<1	<1	NA	<1	**5**	<1	NA	<1	**7**	<1	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	<1	<1	<1 UB	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	NA	<1	<1	NA	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-12-20 75 - 80 05/31/13 Plant 3	MW-12-20 75 - 80 08/15/13 Plant 3	MW-12-20 75 - 80 11/08/13 Plant 3	MW-12-20 70 - 75 02/08/13 Plant 3	MW-12-21 70 - 75 02/14/13 Plant 3	MW-12-21 70 - 75 06/06/13 Plant 3	MW-12-21 70 - 75 08/19/13 Plant 3	MW-12-21 70 - 75 11/11/13 Plant 3	MW-13-22 89 - 94 04/02/13 Plant 3	MW-13-22 89 - 94 05/31/13 Plant 3	MW-13-22 89 - 94 08/19/13 Plant 3	MW-13-22 89 - 94 11/11/13 Plant 3	MW-13-22 89 - 94 12/18/13 Plant 3	MW-13-23 69 - 74 04/02/13 Plant 3
Inorganics																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**281**	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**15.2** [a]	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**93.1**	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.54**	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**22.1**	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	NA	<0.005	<0.005	<0.002	NA	<0.002	<0.005	<0.005	NA	<0.002	<0.005	<0.005	NA	<0.002
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	NA	<0.002	**0.004**	**0.002**	NA	**0.002**	**0.003**	**0.005**	NA	**0.005**	**0.008**	**0.005**	NA	**0.016** [ab]
Barium	mg/L	2	1.2	- -	- -	- -	- -	NA	**0.125**	**0.154**	**0.140**	NA	**0.039**	**0.064**	**0.150**	NA	**0.039**	**0.051**	**0.039**	NA	**0.117**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	**0.08**	**0.07**	**0.06**	NA	**0.37**	**0.42**	**0.59** [a]	NA	**0.27**	**0.24**	**0.23**	NA	**0.31**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	<0.005	<0.0005	<0.001	NA	<0.0010	<0.005	<0.0005	NA	<0.0010	<0.005	<0.0005	NA	<0.0010
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	NA	**0.009**	**0.037**	<0.010	NA	<0.010	**0.019**	**0.069**	NA	<0.010	**0.009**	**0.006**	NA	**0.048**
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	NA	<0.005	<0.005	<0.010	NA	<0.010	**0.006**	**0.009**	NA	<0.010	<0.005	<0.005	NA	**0.028**
Copper	mg/L	1	0.02	- -	- -	- -	- -	NA	<0.005	**0.023** [b]	<0.002	NA	**0.023** [b]	**0.509** [b]	**0.152** [b]	NA	<0.002	<0.005	<0.005	NA	**0.041** [b]
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	NA	<0.003	**0.006** [a]	<0.002	NA	<0.002	**0.004**	**0.008** [a]	NA	<0.002	<0.003	<0.003	NA	**0.019** [a]
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	NA	**0.133** [a]	**0.423** [a]	**0.153** [a]	NA	**0.366** [a]	**0.439** [a]	**0.571** [a]	NA	**0.100** [a]	**0.118** [a]	**0.084** [a]	**0.074** [a]	**5.67** [ab]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	<0.0001	<0.0001	<0.0001	NA	<0.0001	<0.0001	<0.0001	NA	<0.0001	<0.0001	<0.0001	NA	**0.0003** [b]
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	NA	**0.015**	**0.028**	**0.047**	NA	**0.087**	**0.074**	**0.087**	NA	**0.022**	**0.027**	**0.039**	NA	**0.207** [ab]
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	NA	<0.005	<0.005	<0.002	NA	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005	NA	**0.005**
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	<0.0005	<0.0005	<0.0002	NA	<0.0005	<0.0005	<0.0005	NA	<0.0005	<0.0005	<0.0005	NA	<0.0002
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	<0.005	**0.008** [a]	<0.002	NA	<0.002	**0.010** [a]	**0.009** [a]	NA	<0.002	<0.005	<0.004	NA	**0.024** [a]
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	NA	**0.014**	**0.034**	**0.013**	NA	**0.405** [b]	**0.201**	**0.091**	NA	<0.010	**0.011**	**0.006**	NA	**1.41** [b]
Inorganics-Filtered																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	**10.1** [a]	NA	NA	NA	**13.2** [a]	NA	**0.83** [a]	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	<0.002	<0.005	<0.005	<0.002	NA	<0.002	<0.005	<0.005	NA	NA	<0.005	NA	NA	<0.002
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	<0.002	<0.002	**0.002**	<0.002	NA	<0.002	**0.002**	<0.002	NA	NA	**0.006**	NA	NA	**0.003**
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	**0.128**	**0.118**	**0.142**	**0.140**	NA	**0.037**	**0.033**	**0.032**	NA	NA	**0.042**	NA	NA	**0.040**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.07**	**0.06**	**0.06**	**0.07**	NA	**0.38**	**0.43**	**0.60** [a]	NA	NA	**0.23**	NA	NA	**0.31**
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0010	<0.005	<0.0005	<0.001	NA	<0.0010	<0.005	<0.0005	NA	NA	<0.005	NA	NA	<0.0010
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	<0.010	<0.005	<0.005	<0.010	NA	<0.010	**0.007**	<0.005	NA	NA	**0.006**	NA	NA	<0.010
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	<0.010	<0.005	<0.005	<0.010	NA	<0.010	<0.005	<0.005	NA	NA	<0.005	NA	NA	**0.012**
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	<0.002	<0.005	<0.005	<0.002	NA	**0.006**	**0.037** [b]	**0.005**	NA	NA	<0.005	NA	NA	**0.017**
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	<0.002	<0.003	<0.003	<0.002	NA	<0.002	<0.003	<0.003	NA	NA	<0.003	NA	NA	<0.002
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	**0.122** [a]	**0.115** [a]	**0.131** [a]	**0.150** [a]	NA	**0.347** [a]	**0.298** [a]	**0.250** [a]	NA	NA	**0.083** [a]	NA	**0.069** [a]	**1.44** [a]
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	<0.0001	<0.0001	NA	<0.0001	<0.0001	<0.0001	NA	NA	<0.0001	NA	NA	<0.0001
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	**0.012**	**0.014**	**0.019**	**0.045**	NA	**0.092**	**0.066**	**0.066**	NA	NA	**0.023**	NA	NA	**0.114** [a]
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.002	NA	<0.005	<0.005	<0.005	NA	NA	<0.005	NA	NA	<0.002
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	<0.0005	<0.0002	NA	<0.0005	<0.0005	<0.0005	NA	NA	<0.0005	NA	NA	<0.0002
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.002	<0.005	<0.004	<0.002	NA	<0.002	<0.005	<0.004	NA	NA	<0.005	NA	NA	<0.002
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	<0.010	**0.010**	**0.010**	**0.012**	NA	**0.392** [b]	**0.100**	**0.023**	NA	NA	<0.005	NA	NA	**0.213**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-12-20 75 - 80 05/31/13 Plant 3	MW-12-20 75 - 80 08/15/13 Plant 3	MW-12-20 75 - 80 11/08/13 Plant 3	MW-12-20 70 - 75 02/08/13 Plant 3	MW-12-21 70 - 75 02/14/13 Plant 3	MW-12-21 70 - 75 06/06/13 Plant 3	MW-12-21 70 - 75 08/19/13 Plant 3	MW-12-21 70 - 75 11/11/13 Plant 3	MW-13-22 89 - 94 04/02/13 Plant 3	MW-13-22 89 - 94 05/31/13 Plant 3	MW-13-22 89 - 94 08/19/13 Plant 3	MW-13-22 89 - 94 11/11/13 Plant 3	MW-13-22 89 - 94 12/18/13 Plant 3	MW-13-23 69 - 74 04/02/13 Plant 3
General Chemistry																					
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**422**	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	**558**	NA	NA	NA	**435**	NA	**422**	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.5	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	**234**	NA	NA	NA	**288**	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**31**	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**704**	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	<0.5	NA	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	**992** [a]	NA	NA	NA	**669** [a]	NA	**548** [a]	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1,352 F** [a]	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4.3**	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**39 F**	NA
Field																					
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	NA	**1.258**	NA	NA	NA	NA	**2.311**	NA	NA	NA	**1.586**	NA	NA	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	**2.317**	NA	NA	NA	**1.836**	NA	NA	NA	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	NA	**0.14**	NA	NA	NA	**52.2**	**1.60**	NA	NA	**0.39**	**0.15**	NA	NA	NA
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	NA	**149.8**	NA	NA	NA	**120.7**	**42.8**	NA	NA	**-99.40**	**-86.40**	NA	NA	NA
pH	s.u.	- -	- -	- -	- -	- -	- -	NA	**7.08**	NA	NA	NA	**6.51**	**6.76**	NA	NA	**7.17**	**6.98**	NA	NA	NA
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	NA	**24.01**	NA	NA	NA	**14.95**	**23.85**	NA	NA	**19.62**	**18.35**	NA	NA	NA
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	NA	**95**	NA	NA	NA	**42.9**	**149**	NA	NA	**7.29**	**187**	NA	NA	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-23 69 - 74 05/29/13 Plant 3	MW-13-23 69 - 74 08/20/13 Plant 3	MW-13-23 69 - 74 11/12/13 Plant 3	MW-13-24 69 - 74 04/03/13 Plant 3	MW-13-24 69 - 74 05/30/13 Plant 3	MW-13-24 69 - 74 08/15/13 Plant 3	MW-13-24 69 - 74 11/11/13 Plant 3	MW-13-25 67 - 72 04/03/13 Plant 3	MW-13-25 67 - 72 05/28/13 Plant 3	MW-13-25 67 - 72 08/20/13 Plant 3	MW-13-25 67 - 72 11/11/13 Plant 3	MW-13-26 72 - 77 04/04/13 Plant 3	MW-13-26 72 - 77 06/10/13 Plant 3
Volatile Organics																				
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	<5	<5	<5	<5	<5	**8**	**14**	**13**	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10	<10	<10	**11**	**12**	<10	<10	<10	**12**
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	**1**	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	**2**	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-23 69 - 74 05/29/13 Plant 3	MW-13-23 69 - 74 08/20/13 Plant 3	MW-13-23 69 - 74 11/12/13 Plant 3	MW-13-24 69 - 74 04/03/13 Plant 3	MW-13-24 69 - 74 05/30/13 Plant 3	MW-13-24 69 - 74 08/15/13 Plant 3	MW-13-24 69 - 74 11/11/13 Plant 3	MW-13-25 67 - 72 04/03/13 Plant 3	MW-13-25 67 - 72 05/28/13 Plant 3	MW-13-25 67 - 72 08/20/13 Plant 3	MW-13-25 67 - 72 11/11/13 Plant 3	MW-13-26 72 - 77 04/04/13 Plant 3	MW-13-26 72 - 77 06/10/13 Plant 3
Semivolatile Organics																				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<2 J	<1	<1	<1	<1 J	<1	<1	<1	<1 J	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1	**1**	<1	<2	<1	<1	<1	<3 UB	<1	<1	<1	<1	<1
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1	<1	<1	**4**	<1	<1	<1	<1	<1	<1	<1	**3**	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	<2	<2	<1	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	**1**	<1	<2	<2	<1.1	<1	<1	<2 UB	<1	**1**	<2	<1 UB	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<1	**5**	<1	<2	<1	**9**	<1	<1	<1	**5**	<1	<1	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	<1	<1	<1 UB	<1	<1	<1	<4 UB	<1	<1	<1	<3 UB	**1**
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1	<1	<1	NA	<1	<1	<1	NA	<1	<1	<1	NA	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-23 69 - 74 05/29/13 Plant 3	MW-13-23 69 - 74 08/20/13 Plant 3	MW-13-23 69 - 74 11/12/13 Plant 3	MW-13-24 69 - 74 04/03/13 Plant 3	MW-13-24 69 - 74 05/30/13 Plant 3	MW-13-24 69 - 74 08/15/13 Plant 3	MW-13-24 69 - 74 11/11/13 Plant 3	MW-13-25 67 - 72 04/03/13 Plant 3	MW-13-25 67 - 72 05/28/13 Plant 3	MW-13-25 67 - 72 08/20/13 Plant 3	MW-13-25 67 - 72 11/11/13 Plant 3	MW-13-26 72 - 77 04/04/13 Plant 3	MW-13-26 72 - 77 06/10/13 Plant 3
Inorganics																				
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.002	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.002	<0.002
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	<0.002	**0.002**	<0.002	**0.011** [ab]	<0.002	<0.002	<0.002	**0.006**	**0.018** [ab]	**0.022** [ab]	**0.023** [ab]	**0.013** [ab]	**0.003**
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.020**	**0.032**	**0.018**	**0.124**	**0.026**	**0.030**	**0.029**	**0.124**	**0.027**	**0.033**	**0.020**	**0.134**	**0.044**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.34**	**0.34**	**0.24**	**0.12**	**0.12**	**0.17**	**0.15**	**0.09**	**0.06**	**0.10**	**0.07**	**0.19**	**0.10**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0010	<0.005	<0.0005	<0.0010	<0.0010	<0.005	<0.0005	<0.0010	<0.0010	<0.005	<0.0005	<0.0010	<0.0010
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	<0.010	<0.005	**0.007**	**0.032**	<0.010	<0.005	<0.005	**0.008**	<0.010	<0.005	<0.005	**0.026**	<0.010
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.010	**0.005**	**0.006**	**0.018**	<0.010	<0.005	<0.005	<0.010	<0.010	<0.005	**0.005**	**0.023**	<0.010
Copper	mg/L	1	0.02	- -	- -	- -	- -	<0.002	**0.012**	<0.005	**0.036** [b]	<0.002	**0.005**	<0.005	**0.012**	<0.002	**0.007**	<0.005	**0.006**	<0.002
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.002	<0.003	<0.003	**0.028** [a]	<0.002	<0.003	<0.003	**0.003**	<0.002	<0.003	<0.003	<0.002	<0.002
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**1.73** [a]	**1.24** [a]	**1.76** [a]	**4.91** [ab]	**0.378** [a]	**0.330** [a]	**0.340** [a]	**1.21** [a]	**0.816** [a]	**0.856** [a]	**0.824** [a]	**4.68** [ab]	**0.158** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	<0.0001	**0.0003** [b]	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.0005** [b]	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.038**	**0.040**	**0.050**	**0.161** [ab]	**0.022**	**0.027**	**0.045**	**0.041**	**0.031**	**0.040**	**0.060**	**0.148** [ab]	**0.019**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	**0.002**	<0.005	**0.006** [b]	**0.007** [b]	**0.003**	**0.005**
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.002	<0.005	<0.004	**0.020** [a]	**0.002**	**0.011** [a]	<0.004	**0.004**	<0.002	<0.005	<0.004	**0.005** [a]	<0.002
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	**0.022**	**0.025**	**0.017**	**1.60** [b]	<0.010	**0.014**	**0.007**	**0.097**	**0.014**	**0.015**	**0.015**	**3.26** [ab]	<0.010
Inorganics-Filtered																				
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	**1.79** [a]	NA	NA	NA	**15.0** [a]	NA	NA	NA	**14.2** [a]	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	NA	<0.002	NA	<0.005	NA	<0.002	NA	NA	NA	<0.002	NA
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	NA	**0.002**	NA	<0.002	<0.002	**0.004**	NA	NA	**0.023** [ab]	**0.002**	NA
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	NA	**0.058**	NA	**0.028**	NA	**0.126**	NA	NA	NA	**0.052**	NA
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	NA	**0.11**	NA	**0.17**	NA	**0.09**	NA	NA	NA	**0.18**	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	NA	<0.0010	NA	<0.005	NA	<0.0010	NA	NA	NA	<0.0010	NA
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	<0.005	NA	<0.005	NA	NA	NA	<0.005	NA
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	NA	<0.010	NA	<0.005	NA	<0.010	NA	NA	NA	<0.010	NA
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	NA	**0.003**	NA	<0.005	NA	**0.003**	NA	NA	NA	<0.002	NA
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	NA	<0.002	NA	<0.003	<0.003	<0.002	NA	NA	<0.003	<0.002	NA
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	**1.24** [a]	NA	**0.994** [a]	NA	**0.332** [a]	NA	**0.948** [a]	NA	**0.813** [a]	NA	**0.741** [a]	NA
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	NA	<0.0001	NA	<0.0001	NA	<0.0001	NA	NA	NA	<0.0001	NA
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	NA	**0.094**	NA	**0.028**	NA	**0.035**	NA	NA	NA	**0.049**	NA
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	NA	**0.003**	NA	<0.005	NA	<0.002	NA	NA	NA	**0.003**	NA
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	NA	<0.0002	NA	<0.0005	NA	<0.0002	NA	NA	NA	<0.0002	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	NA	<0.002	NA	**0.006** [a]	<0.004	<0.002	NA	NA	<0.004	<0.002	NA
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	NA	**0.491** [b]	NA	**0.008**	NA	**0.042**	NA	NA	NA	**0.117**	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-23 69 - 74 05/29/13 Plant 3	MW-13-23 69 - 74 08/20/13 Plant 3	MW-13-23 69 - 74 11/12/13 Plant 3	MW-13-24 69 - 74 04/03/13 Plant 3	MW-13-24 69 - 74 05/30/13 Plant 3	MW-13-24 69 - 74 08/15/13 Plant 3	MW-13-24 69 - 74 11/11/13 Plant 3	MW-13-25 67 - 72 04/03/13 Plant 3	MW-13-25 67 - 72 05/28/13 Plant 3	MW-13-25 67 - 72 08/20/13 Plant 3	MW-13-25 67 - 72 11/11/13 Plant 3	MW-13-26 72 - 77 04/04/13 Plant 3	MW-13-26 72 - 77 06/10/13 Plant 3
General Chemistry																				
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	**423**	NA	NA	NA	**517**	NA	NA	NA	**528**	NA	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	**282**	NA	NA	NA	**286**	NA	NA	NA	**336**	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	<0.5	NA	NA	NA	<0.5	NA	NA	NA	<0.5	NA	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	**1,030** [a]	NA	NA	NA	**1,120** [a]	NA	NA	NA	**1,400** [a]	NA	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																				
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	NA	**2.151**	NA	NA	NA	**2.929**	NA	NA	NA	**3.778**	NA	NA	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	**2.382**	NA	NA	NA	**2.649**	NA	NA	NA	**2.619**	NA	NA	NA	**2.317**
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.20**	**0.62**	NA	NA	**0.20**	**0.37**	NA	NA	**0.21**	**0.34**	NA	NA	**0.65**
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**-53.50**	**3.5**	NA	NA	**-95.10**	**-113.50**	NA	NA	**-85.50**	**-106.10**	NA	NA	**-64.90**
pH	s.u.	- -	- -	- -	- -	- -	- -	**6.46**	**6.69**	NA	NA	**6.59**	**6.68**	NA	NA	**10.25**	**7.03**	NA	NA	**6.61**
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**19.00**	**21.01**	NA	NA	**19.40**	**18.72**	NA	NA	**18.43**	**22.63**	NA	NA	**17.17**
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**4.43**	**9.66**	NA	NA	**8.11**	**24.3**	NA	NA	**2.81**	**9.12**	NA	NA	**4.33**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-26 72 - 77 08/16/13 Plant 3	MW-13-26 72 - 77 11/08/13 Plant 3	MW-13-27 67 - 72 04/24/13 Plant 3	MW-13-27 67 - 72 05/29/13 Plant 3	MW-13-27 67 - 72 08/20/13 Plant 3	MW-13-27 67 - 72 11/11/13 Plant 3	MW-13-28 99 - 115.5 04/23/13 Plant 3	MW-13-28 99 - 115.5 06/12/13 Plant 3	MW-13-28 99 - 115.5 06/12/13 Plant 3	MW-13-28 99 - 115.5 08/19/13 Plant 3	MW-13-28 99 - 115.5 11/11/13 Plant 3	MW-13-29 68 - 73 04/25/13 Plant 3	MW-13-29 68 - 73 05/24/13 Plant 3
Volatile Organics																				
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5 B [<7 B]	<5	<5	<5	<5	<5	<5	NA	<5	<5	<5	**38**	**30**
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10 [<10]	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10 [<10]	<10	<10	<10	<10	<10	<10	NA	<10	**38**	**22**	<10	**13**
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10 [<10]	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	**1**
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	**5**
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10 [<10]	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10 [<10]	<10	<10	<10	<10	<10	<10	NA	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	**1**
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2 [<2]	<2	<2	<2	<2	<2	<2	NA	<2	<2	<2	<2	**2**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-26 72 - 77 08/16/13 Plant 3	MW-13-26 72 - 77 11/08/13 Plant 3	MW-13-27 67 - 72 04/24/13 Plant 3	MW-13-27 67 - 72 05/29/13 Plant 3	MW-13-27 67 - 72 08/20/13 Plant 3	MW-13-27 67 - 72 11/11/13 Plant 3	MW-13-28 99 - 115.5 04/23/13 Plant 3	MW-13-28 99 - 115.5 06/12/13 Plant 3	MW-13-28 99 - 115.5 06/12/13 Plant 3	MW-13-28 99 - 115.5 08/19/13 Plant 3	MW-13-28 99 - 115.5 11/11/13 Plant 3	MW-13-29 68 - 73 04/25/13 Plant 3	MW-13-29 68 - 73 05/24/13 Plant 3
Semivolatile Organics																				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1 [<1]	<1	<1 J	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 J	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1 [<1]	<1	<1 J	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 J	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1 J	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1 UB	NA	**2**	**1**	<1	**2**	**3**
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1 [<1]	<1	<1 J	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2 [<2]	<2	<2	<2	<2	<2	<2	NA	<2	<2	<2	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<2	<1	<1	<1	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<8 B [<8 B]	<1	<1	<1	**6**	<1	<1	NA	**5**	**8**	<1	<1	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<2 UB	NA	<1	<1	<1	<1	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	**3**	<1	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1 [<1]	<1	NA	<1	<1	<1	NA	NA	<1	<1	<1	NA	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	**2**	**1 B**	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1 [<1]	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-26 72 - 77 08/16/13 Plant 3	MW-13-26 72 - 77 11/08/13 Plant 3	MW-13-27 67 - 72 04/24/13 Plant 3	MW-13-27 67 - 72 05/29/13 Plant 3	MW-13-27 67 - 72 08/20/13 Plant 3	MW-13-27 67 - 72 11/11/13 Plant 3	MW-13-28 99 - 115.5 04/23/13 Plant 3	MW-13-28 99 - 115.5 06/12/13 Plant 3	MW-13-28 99 - 115.5 06/12/13 Plant 3	MW-13-28 99 - 115.5 08/19/13 Plant 3	MW-13-28 99 - 115.5 11/11/13 Plant 3	MW-13-29 68 - 73 04/25/13 Plant 3	MW-13-29 68 - 73 05/24/13 Plant 3
Inorganics																				
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**139**	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**46.2**	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.002	<0.002	<0.005	<0.005	<0.002	NA	<0.002	<0.005	<0.005	<0.002	<0.002
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.003 [0.002]**	**0.002**	**0.005**	**0.007**	**0.005**	**0.004**	**0.021** [ab]	NA	**0.009**	**0.007**	**0.005**	**0.005**	**0.005**
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.036 [0.037]**	**0.032**	**0.105**	**0.069**	**0.050**	**0.034**	**0.088**	NA	**0.100**	**0.086**	**0.115**	**0.056**	**0.021**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.09 [0.08]**	**0.08**	**0.08**	**0.06**	**0.08**	**0.09**	**0.15**	NA	**0.11**	**0.09**	**0.09**	**0.79** [a]	**0.77** [a]
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.005 [<0.005]	<0.0005	<0.0010	<0.0010	<0.005	<0.0005	<0.0010	NA	<0.0010	<0.005	<0.0005	<0.0010	<0.0010
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	**0.008 [0.008]**	<0.005	<0.010	<0.010	<0.005	<0.005	<0.010	NA	<0.010	<0.005	<0.005	**0.010 b**	<0.010
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.010	<0.010	<0.005	<0.005	<0.010	NA	<0.010	<0.005	<0.005	**0.016**	**0.016**
Copper	mg/L	1	0.02	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	**0.003**	<0.002	<0.005	<0.005	**0.002**	NA	**0.007**	<0.005	<0.005	**0.009**	**0.002**
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003 [<0.003]	<0.003	<0.002	<0.002	<0.003	<0.003	<0.002	NA	<0.002	<0.003	<0.003	**0.003**	<0.002
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.140 [0.139]** [a]	**0.137** [a]	**0.820** [a]	**0.813** [a]	**0.832** [a]	**0.680** [a]	**0.045**	NA	**0.118** [a]	**0.014**	**0.009**	**0.716** [a]	**0.560** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001 [<0.0001]	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NA	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.027 [0.025]**	**0.025**	**0.014**	**0.019**	**0.029**	**0.028**	**0.021**	NA	**0.012**	**0.009**	**0.015**	**0.064**	**0.054**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005 [<0.005]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	**0.006** [b]	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005 [<0.0005]	<0.0005	**0.0031 J** [b]	<0.0005	<0.0005	<0.0005	**0.0007** [b]	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.005 [<0.005]	<0.004	<0.002	**0.002**	<0.005	<0.004	<0.002	NA	<0.002	<0.005	<0.004	**0.006** [a]	<0.002
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	<0.005 [0.005]	<0.005	**0.024**	<0.010	**0.006**	**0.008**	**0.019**	NA	**0.096**	**0.013**	<0.005	**0.150**	**0.033**
Inorganics-Filtered																				
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**134**	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**46.7**	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	<0.002	NA	NA	NA	<0.002	**0.003**	<0.002	<0.005	NA	<0.002	NA
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	**0.005**	NA	NA	NA	**0.020** [ab]	**0.007**	**0.007**	**0.005**	NA	<0.002	NA
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	**0.102**	NA	NA	NA	**0.077**	**0.090**	**0.086**	**0.038**	NA	**0.021**	NA
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	**0.07**	NA	NA	NA	**0.15**	**0.12**	**0.11**	**0.08**	NA	**0.75** [a]	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	<0.0010	NA	NA	NA	<0.0010	<0.0010	<0.0010	<0.005	NA	<0.0010	NA
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	<0.010	NA	NA	NA	<0.010	<0.010	<0.010	<0.005	NA	<0.010	NA
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	<0.010	NA	NA	NA	<0.010	<0.010	<0.010	<0.005	NA	**0.012**	NA
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	**0.002**	NA	NA	NA	<0.002	**0.003**	<0.002	<0.005	NA	**0.003**	NA
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	<0.002	NA	NA	NA	<0.002	<0.002	<0.002	<0.003	NA	<0.002	NA
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	NA	**0.881** [a]	NA	NA	NA	**0.046**	**0.112** [a]	**0.106** [a]	**0.010**	NA	**0.328** [a]	NA
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	<0.0001	NA	NA	NA	<0.0001	<0.0001	<0.0001	<0.0001	NA	<0.0001	NA
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	**0.023**	NA	NA	NA	**0.023**	**0.011**	**0.010**	<0.005	NA	**0.061**	NA
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	**0.006** [b]	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005	NA
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	**0.0035 J** [b]	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	NA	<0.0005	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	<0.002	NA	NA	NA	<0.002	<0.002	<0.002	<0.005	NA	<0.002	NA
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	**0.020**	NA	NA	NA	**0.017**	**0.062**	**0.045**	**0.005**	NA	**0.022**	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-26 72 - 77 08/16/13 Plant 3	MW-13-26 72 - 77 11/08/13 Plant 3	MW-13-27 67 - 72 04/24/13 Plant 3	MW-13-27 67 - 72 05/29/13 Plant 3	MW-13-27 67 - 72 08/20/13 Plant 3	MW-13-27 67 - 72 11/11/13 Plant 3	MW-13-28 99 - 115.5 04/23/13 Plant 3	MW-13-28 99 - 115.5 06/12/13 Plant 3	MW-13-28 99 - 115.5 06/12/13 Plant 3	MW-13-28 99 - 115.5 08/19/13 Plant 3	MW-13-28 99 - 115.5 11/11/13 Plant 3	MW-13-29 68 - 73 04/25/13 Plant 3	MW-13-29 68 - 73 05/24/13 Plant 3
General Chemistry																				
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**348**	NA	NA	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**423**	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**107**	NA	NA	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																				
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	**2.271**	NA	NA	NA	**3.805**	NA	NA	NA	NA	**0.538**	NA	NA	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	**3.532**	NA	NA	NA	NA	**1.080**	NA	NA	NA	**2.445**
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.40**	NA	NA	**0.20**	**0.19**	NA	NA	NA	**0.16**	**1.05**	NA	NA	**1.57**
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**98.1**	NA	NA	**-95.40**	**-94.20**	NA	NA	NA	**-117.90**	**-151.70**	NA	NA	**-78.10**
pH	s.u.	- -	- -	- -	- -	- -	- -	**6.82**	NA	NA	**6.57**	**6.81**	NA	NA	NA	**7.17**	**10.14**	NA	NA	**11.88**
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**21.07**	NA	NA	**17.97**	**22.05**	NA	NA	NA	**17.19**	**22.02**	NA	NA	**16.43**
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**8.76**	NA	NA	**2.30**	**7.65**	NA	NA	NA	**48.5**	**168**	NA	NA	**2.19**

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Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-29 68 - 73 08/16/13 Plant 3	MW-13-29 68 - 73 11/11/13 Plant 3	MW-13-29 68 - 73 12/18/13 Plant 3	MW-13-30 72 - 77 04/25/13 Plant 3	MW-13-30 72 - 77 05/28/13 Plant 3	MW-13-30 72 - 77 08/16/13 Plant 3	MW-13-30 72 - 77 11/12/13 Plant 3	MW-13-31 5 - 10 08/22/13 Plant 3	MW-13-31 5 - 10 11/07/13 Plant 3	MW-13-32 5 - 10 08/27/13 Plant 3	MW-13-32 5 - 10 11/08/13 Plant 3	MW-13-33 12 - 17 08/23/13 Plant 3	MW-13-33 12 - 17 11/06/13 Plant 3	MW-13-34 74 - 79 08/20/13 Plant 3
Volatile Organics																					
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	**28**	**31**	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	**17**
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	NA	<1	<1	<1	<1	<1	<1	**2**	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	NA	<1	<1	<1	<1	<1	<1	**21**	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	NA	<1	<1	<1	**1**	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

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Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-29 68 - 73 08/16/13 Plant 3	MW-13-29 68 - 73 11/11/13 Plant 3	MW-13-29 68 - 73 12/18/13 Plant 3	MW-13-30 72 - 77 04/25/13 Plant 3	MW-13-30 72 - 77 05/28/13 Plant 3	MW-13-30 72 - 77 08/16/13 Plant 3	MW-13-30 72 - 77 11/12/13 Plant 3	MW-13-31 5 - 10 08/22/13 Plant 3	MW-13-31 5 - 10 11/07/13 Plant 3	MW-13-32 5 - 10 08/27/13 Plant 3	MW-13-32 5 - 10 11/08/13 Plant 3	MW-13-33 12 - 17 08/23/13 Plant 3	MW-13-33 12 - 17 11/06/13 Plant 3	MW-13-34 74 - 79 08/20/13 Plant 3
Semivolatile Organics																					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	NA	<1 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1 J	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1	<1	NA	<10 UB	<1	<1	<1	<1	<1	**7** [a]	<1	**3**	<1	**1**
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1	<1	NA	**3**	<1	<1	<1	<1	<1	**2**	<1	<1	<1	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1	<2	NA	**2**	<1	<1	<2	<1	<2	<1	<2	<1	<2	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<7 UB	<1	NA	<1	<1	<5 UB	<1	**4**	<1	**22 B**	<1	**10 B**	<1	**6**
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	<1	NA	<2 UB	<1 UB	<1	<1	<1	<1	**3**	<1	**1**	<1	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1	<1	NA	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	<1	NA	<1	<1	<1	<1	<1	<1	**1**	<1	<1	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-29 68 - 73 08/16/13 Plant 3	MW-13-29 68 - 73 11/11/13 Plant 3	MW-13-29 68 - 73 12/18/13 Plant 3	MW-13-30 72 - 77 04/25/13 Plant 3	MW-13-30 72 - 77 05/28/13 Plant 3	MW-13-30 72 - 77 08/16/13 Plant 3	MW-13-30 72 - 77 11/12/13 Plant 3	MW-13-31 5 - 10 08/22/13 Plant 3	MW-13-31 5 - 10 11/07/13 Plant 3	MW-13-32 5 - 10 08/27/13 Plant 3	MW-13-32 5 - 10 11/08/13 Plant 3	MW-13-33 12 - 17 08/23/13 Plant 3	MW-13-33 12 - 17 11/06/13 Plant 3	MW-13-34 74 - 79 08/20/13 Plant 3
Inorganics																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**593**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	**7.37** [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	**117**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**15.4**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	**42.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005	<0.005	NA	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.006**	**0.006**	NA	**0.002**	**0.002**	**0.003**	<0.002	<0.002	**0.004**	**0.006**	**0.002**	<0.002	<0.002	**0.006**
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.021**	**0.018**	NA	**0.095**	**0.046**	**0.048**	**0.051**	**0.198**	**0.364**	**0.223**	**0.143**	**0.249**	**0.087**	**0.102**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.835** [a]	**0.54** [a]	NA	**0.23**	**0.19**	**0.226**	**0.21**	**0.28**	**0.27**	**0.22**	**0.32**	**0.14**	**0.14**	**0.07**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.005	<0.0005	NA	<0.0010	<0.0010	<0.005	<0.0005	<0.0005	**0.0033**	<0.0005	<0.0005	**0.0018**	<0.0005	<0.005
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	**0.015**	<0.005	NA	<0.010	<0.010	**0.017**	**0.011**	**0.011**	**0.018**	**0.010**	<0.005	**0.017**	<0.005	**0.005**
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	**0.014**	**0.014**	NA	**0.006 b**	<0.010	<0.005	<0.005	<0.005	<0.005	**0.005**	<0.005	**0.021**	<0.005	<0.005
Copper	mg/L	1	0.02	- -	- -	- -	- -	**0.006**	<0.005	NA	**0.010**	**0.002**	**0.006**	<0.005	**0.018**	**0.117** [b]	**0.047** [b]	**0.016**	**0.120** [b]	**0.011**	<0.005
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003	<0.003	NA	**0.002**	<0.002	<0.003	<0.003	**0.070** [ab]	**0.337** [ab]	**0.065** [ab]	<0.003	**0.065** [ab]	<0.003	<0.003
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.619** [a]	**0.778** [a]	**0.841** [a]	**1.30** [a]	**0.959** [a]	**0.565** [a]	**0.407** [a]	**0.740** [a]	**0.165** [a]	**0.625** [a]	**0.737** [a]	**1.38** [a]	**0.029**	**0.187** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	NA	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.0002** [b]	**0.0015** [b]	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.070**	**0.054**	NA	**0.037**	**0.046**	**0.028**	**0.021**	**0.021**	**0.078**	**0.043**	**0.241** [ab]	**0.065**	**0.011**	**0.024**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005	**0.007** [b]	**0.011** [b]	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.005	<0.004	NA	<0.002	<0.002	<0.005	**0.004**	**0.007** [a]	**0.024** [a]	**0.017** [a]	<0.004	**0.027** [a]	<0.004	<0.005
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	**0.015**	**0.012**	NA	**0.180**	**0.035**	**0.013**	<0.005	**0.140**	**0.883** [b]	**0.191**	**0.035**	**0.183**	**0.009**	**0.064**
Inorganics-Filtered																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	**1.87** [a]	NA	NA	NA	NA	**6.98** [a]	NA	NA	NA	**0.71** [a]	NA	**14.7** [a]
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	NA	<0.002	NA	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	NA	<0.002	NA	<0.002	<0.002	<0.002	<0.002	**0.005**	NA	<0.002	<0.002	**0.007**
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	NA	**0.085**	NA	**0.036**	**0.046**	**0.161**	**0.153**	**0.146**	NA	**0.106**	**0.084**	**0.085**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	NA	**0.24**	NA	**0.216**	**0.19**	**0.26**	**0.25**	**0.22**	NA	**0.14**	**0.13**	**0.06**
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	NA	<0.0010	NA	<0.005	<0.0005	<0.0005	**0.0009**	<0.0005	NA	<0.0005	<0.0005	<0.005
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	NA	<0.010	NA	<0.005	**0.012**	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	NA	**0.006 b**	NA	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005	<0.005	<0.005
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	NA	**0.004**	NA	<0.005	<0.005	**0.007**	<0.005	<0.005	NA	**0.006**	**0.008**	<0.005
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	NA	<0.002	NA	<0.003	<0.003	<0.003	<0.003	<0.003	NA	<0.003	<0.003	<0.003
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	NA	**0.809** [a]	**1.28** [a]	NA	**0.518** [a]	**0.384** [a]	**0.606** [a]	**0.058** [a]	**0.641** [a]	NA	**0.163** [a]	**0.017**	**0.129** [a]
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	NA	<0.0001	NA	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NA	<0.0001	<0.0001	<0.0001
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	NA	**0.038**	NA	**0.020**	**0.020**	**0.017**	**0.024**	**0.013**	NA	**0.020**	**0.010**	**0.019**
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	<0.005	<0.005	<0.005	**0.011** [b]	<0.005	NA	<0.005	<0.005	<0.005
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NA	<0.0005	<0.0005	<0.0005
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	NA	<0.002	NA	<0.005	<0.004	<0.005	<0.004	<0.005	NA	<0.005	<0.004	<0.005
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	NA	**0.192**	NA	<0.005	<0.005	**0.038**	**0.392** [b]	<0.005	NA	<0.005	**0.009**	**0.036**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-29 68 - 73 08/16/13 Plant 3	MW-13-29 68 - 73 11/11/13 Plant 3	MW-13-29 68 - 73 12/18/13 Plant 3	MW-13-30 72 - 77 04/25/13 Plant 3	MW-13-30 72 - 77 05/28/13 Plant 3	MW-13-30 72 - 77 08/16/13 Plant 3	MW-13-30 72 - 77 11/12/13 Plant 3	MW-13-31 5 - 10 08/22/13 Plant 3	MW-13-31 5 - 10 11/07/13 Plant 3	MW-13-32 5 - 10 08/27/13 Plant 3	MW-13-32 5 - 10 11/08/13 Plant 3	MW-13-33 12 - 17 08/23/13 Plant 3	MW-13-33 12 - 17 11/06/13 Plant 3	MW-13-34 74 - 79 08/20/13 Plant 3
General Chemistry																					
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**429**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**429**	NA	NA	NA	NA	**404**	NA	NA	NA	**488**	NA	**440**
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	**265**	NA	NA	NA	**187**	NA	**290**
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	**31**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**1,481**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	<0.5	NA	<0.5
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	NA	**3,860** [a]	NA	NA	NA	NA	**57**	NA	NA	NA	**175**	NA	**253** [a]
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	**2,580 F** [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**5.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	**10 F**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																					
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	**3.089**	NA	NA	NA	NA	**2.035**	NA	**0.863**	**0.743**	NA	**0.672**	**0.925**	**0.696**	**2.104**
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**2.774**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.18**	NA	NA	NA	**0.52**	**0.17**	NA	**1.29**	**1.42**	NA	**1.05**	**4.68**	**1.12**	**0.15**
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**-57.90**	NA	NA	NA	**-179.00**	**-126.10**	NA	**-75.20**	**-41.1**	NA	**149.4**	**74.5**	**98.8**	**-115.50**
pH	s.u.	- -	- -	- -	- -	- -	- -	**6.68**	NA	NA	NA	**7.19**	**6.81**	NA	**6.44**	**6.69**	NA	**6.78**	**6.88**	**6.77**	**7.02**
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**17.96**	NA	NA	NA	**17.58**	**19.56**	NA	**20.25**	**13.56**	NA	**8.77**	**15.54**	**12.79**	**21.16**
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**9.8**	NA	NA	NA	**6.57**	**127**	NA	**6.95**	**88.8**	NA	**5.48**	**73.5**	**272**	**407**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-34 74 - 79 11/15/13 Plant 3	MW-13-34 74 - 79 12/19/13 Plant 3	MW-13-35 25 - 30 09/20/13 Plant 6	MW-13-35 25 - 30 11/05/13 Plant 6	MW-13-36R 5.5 - 10.5 12/18/13 Plant 6	MW-13-37 97 - 112 11/06/13 Plant 3	MW-13-38 107 - 124 11/06/13 Plant 3	MW-13-39B 97 - 112 11/15/13 Plant 3	MW-13-40 72 - 77 12/17/13 Plant 3	MW-13-41 77 - 82 12/17/13 Plant 3	MW-13-42 70 - 75 12/17/13 Plant 2	MW-13-43 72 - 77 12/13/13 Plant 2	MW-13-44 96 - 115 11/15/13 Plant 2	MW-13-44 96 - 115 12/13/13 Plant 2
Volatile Organics																					
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	**99** [a]	NA	<5	<5	<5	<5	<5	<5	<5	**13**	**6**	**220 Y** [a]	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

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Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-34 74 - 79 11/15/13 Plant 3	MW-13-34 74 - 79 12/19/13 Plant 3	MW-13-35 25 - 30 09/20/13 Plant 6	MW-13-35 25 - 30 11/05/13 Plant 6	MW-13-36R 5.5 - 10.5 12/18/13 Plant 6	MW-13-37 97 - 112 11/06/13 Plant 3	MW-13-38 107 - 124 11/06/13 Plant 3	MW-13-39B 97 - 112 11/15/13 Plant 3	MW-13-40 72 - 77 12/17/13 Plant 3	MW-13-41 77 - 82 12/17/13 Plant 3	MW-13-42 70 - 75 12/17/13 Plant 2	MW-13-43 72 - 77 12/13/13 Plant 2	MW-13-44 96 - 115 11/15/13 Plant 2	MW-13-44 96 - 115 12/13/13 Plant 2
Semivolatile Organics																					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	NA	<1	<1	**3**	<1	<1	<1	<1	<1	<1	<1	NA	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	NA	<1	<1	**1**	<1	<1	<1	<1	<1	<1	<1	NA	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	NA	<1	<1	**2**	<1	<1	<1	<1	<1	<1	<1	NA	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1 J	<1 J	NA	<1 J
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1 UB
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	R	R	NA	R
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	NA	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1	NA	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	NA	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	NA	<1	<1	**1**	<1	<1	<1	<1	<1	<1	<1	NA	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	NA	<1	<1	**8**	<1	<1	<1	<1	<1	<1	<1	NA	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-34 74 - 79 11/15/13 Plant 3	MW-13-34 74 - 79 12/19/13 Plant 3	MW-13-35 25 - 30 09/20/13 Plant 6	MW-13-35 25 - 30 11/05/13 Plant 6	MW-13-36R 5.5 - 10.5 12/18/13 Plant 6	MW-13-37 97 - 112 11/06/13 Plant 3	MW-13-38 107 - 124 11/06/13 Plant 3	MW-13-39B 97 - 112 11/15/13 Plant 3	MW-13-40 72 - 77 12/17/13 Plant 3	MW-13-41 77 - 82 12/17/13 Plant 3	MW-13-42 70 - 75 12/17/13 Plant 2	MW-13-43 72 - 77 12/13/13 Plant 2	MW-13-44 96 - 115 11/15/13 Plant 2	MW-13-44 96 - 115 12/13/13 Plant 2
Inorganics																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**154**	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	**261**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	**12.7** [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3.26** [a]	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**58.6**	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	**82.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	**5.19**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.75**	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	**106**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**148** [a]	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA	<0.005
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.003**	NA	**0.009**	**0.006**	**0.003**	**0.009**	**0.007**	**0.005**	**0.015** [ab]	**0.018** [ab]	**0.005**	**0.003**	NA	<0.002
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.190**	NA	**0.363**	**0.272**	**0.064**	**0.222**	**0.128**	**0.077**	**0.288**	**0.076**	**0.106**	**0.516**	NA	**0.111**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.19**	NA	**0.06**	**0.10**	**0.13**	**0.08**	**0.12**	**0.07**	**0.07**	**0.22**	**0.08**	**0.11**	NA	**0.08**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NA	<0.0005
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	**0.013**	NA	**0.013**	<0.005	<0.005	<0.005	**0.043**	<0.005	**0.007**	**0.006**	**0.276** [ab]	<0.005	NA	**0.008**
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.006**	**0.016**	<0.005	NA	<0.005
Copper	mg/L	1	0.02	- -	- -	- -	- -	<0.005	NA	**0.010**	<0.005	**0.006**	<0.005	<0.005	<0.005	<0.005	**0.005**	**0.029** [b]	<0.005	NA	**0.010**
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003	NA	<0.003	<0.003	**0.003**	<0.003	<0.003	<0.003	<0.003	<0.003	**0.008** [a]	<0.003	NA	<0.003
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.310** [a]	**0.201** [a]	**0.316** [a]	**0.252** [a]	**0.021**	**0.159** [a]	**0.127** [a]	**0.154** [a]	**0.161** [a]	**0.088** [a]	**0.776** [a]	**0.045**	NA	**0.249** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	NA	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NA	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.022**	NA	**0.051**	**0.022**	**0.012**	**0.014**	**0.032**	**0.015**	**0.031**	**0.030**	**0.249** [ab]	**0.014**	NA	**0.014**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.009** [b]	<0.005	<0.005	NA	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NA	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.004	NA	**0.008** [a]	**0.005** [a]	**0.005** [a]	<0.004	<0.004	<0.004	<0.004	<0.004	**0.016** [a]	<0.004	NA	<0.004
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	**0.017**	NA	**0.038**	**0.018**	<0.005	**0.006**	**0.009**	**0.006**	**0.010**	**0.010**	**0.113**	<0.005	NA	**0.068**
Inorganics-Filtered																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	**257**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	**10.6** [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.14** [a]	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	**82.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	**4.98**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	**108**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005	NA	NA	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	<0.005
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	**0.003**	NA	NA	NA	**0.003**	NA	**0.004**	**0.003**	**0.015** [ab]	**0.016** [ab]	<0.002	NA	NA	<0.002
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	**0.174**	NA	NA	NA	**0.070**	NA	**0.127**	**0.075**	**0.290**	**0.066**	**0.055**	NA	NA	**0.098**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.20**	NA	NA	NA	**0.13**	NA	**0.13**	**0.06**	**0.05**	**0.21**	**0.07**	NA	NA	**0.07**
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0005	NA	NA	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA	<0.0005
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	<0.005	NA	NA	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	<0.005
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005	NA	NA	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	<0.005
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	<0.005	NA	NA	NA	<0.005	NA	<0.005	<0.005	<0.005	<0.005	<0.005	NA	NA	<0.005
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003	NA	NA	NA	<0.003	NA	<0.003	<0.003	<0.003	<0.003	<0.003	NA	NA	<0.003
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	**0.258** [a]	**0.202** [a]	NA	NA	**0.031**	NA	**0.117** [a]	**0.143** [a]	**0.156** [a]	**0.055** [a]	**0.256** [a]	**0.098** [a]	NA	**0.188** [a]
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	NA	NA	NA	<0.0001	NA	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NA	NA	<0.0001
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	**0.019**	NA	NA	NA	**0.013**	NA	**0.017**	**0.014**	**0.029**	**0.028**	**0.038**	NA	NA	**0.011**
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	NA	NA	NA	<0.005	NA	**0.005**	<0.005	<0.005	<0.005	<0.005	NA	NA	<0.005
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	NA	NA	NA	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA	<0.0005
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.004	NA	NA	NA	**0.005** [a]	NA	<0.004	<0.004	<0.004	<0.004	<0.004	NA	NA	<0.004
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	<0.005	NA	NA	NA	**0.019**	NA	**0.011**	<0.005	**0.007**	**0.007**	**0.021**	NA	NA	**0.006**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-34 74 - 79 11/15/13 Plant 3	MW-13-34 74 - 79 12/19/13 Plant 3	MW-13-35 25 - 30 09/20/13 Plant 6	MW-13-35 25 - 30 11/05/13 Plant 6	MW-13-36R 5.5 - 10.5 12/18/13 Plant 6	MW-13-37 97 - 112 11/06/13 Plant 3	MW-13-38 107 - 124 11/06/13 Plant 3	MW-13-39B 97 - 112 11/15/13 Plant 3	MW-13-40 72 - 77 12/17/13 Plant 3	MW-13-41 77 - 82 12/17/13 Plant 3	MW-13-42 70 - 75 12/17/13 Plant 2	MW-13-43 72 - 77 12/13/13 Plant 2	MW-13-44 96 - 115 11/15/13 Plant 2	MW-13-44 96 - 115 12/13/13 Plant 2
General Chemistry																					
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	**452**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**431**	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	**452**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**431**	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	<2.5	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	**329** [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	**316** [a]	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	**654**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**384**	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	**172**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**66**	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	**1,260 J** [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1,104** [a]	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	**8.0**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**6.5**	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	**18 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	**7**	NA	NA
Field																					
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	**2.432**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	**2.14**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	NA	NA	NA	**-75.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	s.u.	- -	- -	- -	- -	- -	- -	NA	NA	NA	**6.95**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	NA	NA	NA	**14.29**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	NA	NA	NA	**8.76**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-45 72 - 77 12/13/13 Plant 2	MW-13-46 68 - 73 12/19/13 Plant 3	MW-13-47 99 - 119 11/15/13 Plant 3	MW-13-47 99 - 119 12/19/13 Plant 3	MW-13-48 65 - 70 12/19/13 Plant 3	MW-13-49 73 - 78 12/20/13 Plant 3	MW-13-50 85 - 107 12/16/13 Plant 6	MW-13-51 77 - 87 12/16/13 Plant 2	MW-13-52 70 - 80 12/20/13 Plant 6	MW-13-53 73 - 83 12/17/13 Plant 6	MW-19 55 - 65 06/04/13 Plant 3	MW-19 55 - 65 08/22/13 Plant 3	MW-19 55 - 65 11/14/13 Plant 3	MW-22 52.5 - 62.5 05/30/13 Plant 3
Volatile Organics																					
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	**25**	<5	<5	<5	**34**	<5	<5 [<5]	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10	**13 J**	<10 [<10]	<10	<10	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	**14** [a]	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	**1**	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	<1	<1	**9**	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	**1**	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	**1**	<1	<1	<1	<1	**2**	<1 [<1]	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	**2**	<2 [<2]	<2	<2	<2	<2	<2	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-45 72 - 77 12/13/13 Plant 2	MW-13-46 68 - 73 12/19/13 Plant 3	MW-13-47 99 - 119 11/15/13 Plant 3	MW-13-47 99 - 119 12/19/13 Plant 3	MW-13-48 65 - 70 12/19/13 Plant 3	MW-13-49 73 - 78 12/20/13 Plant 3	MW-13-50 85 - 107 12/16/13 Plant 6	MW-13-51 77 - 87 12/16/13 Plant 2	MW-13-52 70 - 80 12/20/13 Plant 6	MW-13-53 73 - 83 12/17/13 Plant 6	MW-19 55 - 65 06/04/13 Plant 3	MW-19 55 - 65 08/22/13 Plant 3	MW-19 55 - 65 11/14/13 Plant 3	MW-22 52.5 - 62.5 05/30/13 Plant 3
Semivolatile Organics																					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1 J	<1	NA	<1	<1	<1	<1 J [<1 J]	<1 J	<1 J	<1 J	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	<1	<1	NA	<1	<1	**1**	<1 [<1]	<1 UB	**1 J**	<1 UB	<1	**4**	<1 UB	<1
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	R	<1	NA	<1	<1	<1	R [R]	R	<1 J	R	<1	<1	<1	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	<2	NA	<2	<2	<2	<2 [<2]	<2	<2 J	<2	<2	<2	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	**21 B**	<1	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	<1	NA	<1	<1	<1	<1 [<1]	<1	<1 J	<1	<1	<1	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
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Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-45 72 - 77 12/13/13 Plant 2	MW-13-46 68 - 73 12/19/13 Plant 3	MW-13-47 99 - 119 11/15/13 Plant 3	MW-13-47 99 - 119 12/19/13 Plant 3	MW-13-48 65 - 70 12/19/13 Plant 3	MW-13-49 73 - 78 12/20/13 Plant 3	MW-13-50 85 - 107 12/16/13 Plant 6	MW-13-51 77 - 87 12/16/13 Plant 2	MW-13-52 70 - 80 12/20/13 Plant 6	MW-13-53 73 - 83 12/17/13 Plant 6	MW-19 55 - 65 06/04/13 Plant 3	MW-19 55 - 65 08/22/13 Plant 3	MW-19 55 - 65 11/14/13 Plant 3	MW-22 52.5 - 62.5 05/30/13 Plant 3
Inorganics																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**167**	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**271**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	**20.3** [a]	NA	NA	NA	**10.7** [a]	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**55.8**	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	**62.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**3.76**	NA	NA	NA	**4.77**	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	**258** [a]	NA	NA	NA	**12.5**	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.005**	<0.002	NA	**0.012** [ab]	**0.007**	**0.003**	**0.007 [0.007]**	**0.006**	**0.005**	**0.009**	<0.002	**0.004**	**0.003**	**0.003**
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.354**	**0.085**	NA	**0.109 J**	**0.581**	**0.140**	**0.175 [0.181]**	**0.174**	**0.286**	**0.226**	**0.052**	**0.136**	**0.076**	**0.112**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.08**	**0.08**	NA	**0.11**	**0.12**	**0.14**	**0.05 [0.05]**	**0.05**	**0.06**	**0.05**	**0.04**	**0.06**	<0.04	<0.04
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0005	<0.0005	NA	<0.0005	<0.0005	**0.0027**	<0.0005 [<0.0005]	<0.0005	<0.0005	<0.0005	<0.0010	**0.0014**	**0.0010**	<0.0010
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	<0.005	<0.005	NA	<0.005	<0.005	**0.008**	<0.005 [<0.005]	**0.017**	<0.005	**0.007**	<0.010	**0.128** [a]	**0.009**	<0.010
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.01	<0.01	<0.01	<0.01
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	<0.010	**0.010**	<0.005	<0.010
Copper	mg/L	1	0.02	- -	- -	- -	- -	**0.005**	<0.005	NA	<0.005	**0.011**	**0.009**	<0.005 [<0.005]	**0.008**	<0.005	<0.005	**0.004**	**0.053** [b]	**0.027** [b]	<0.002
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003	<0.003	NA	<0.003	<0.003	**0.004**	<0.003 [<0.003]	<0.003	<0.003	<0.003	<0.002	**0.029** [a]	**0.020** [a]	<0.002
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.059** [a]	**0.419** [a]	NA	**0.370** [a]	**0.352** [a]	**0.384** [a]	**0.117 [0.116]** [a]	**0.329** [a]	**0.168** [a]	**0.141** [a]	**0.039**	**0.264** [a]	**0.132** [a]	**0.707** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	NA	<0.0001	<0.0001	<0.0001	<0.0001 [<0.0001]	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.013**	**0.009**	NA	**0.059**	**0.008**	**0.042**	**0.007 [0.008]**	**0.028**	**0.009**	**0.023**	<0.010	**0.079**	**0.020**	**0.015**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	NA	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	NA	<0.0005	<0.0005	<0.0005	<0.0005 [<0.0005]	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.004	<0.004	NA	<0.004	<0.004	<0.004	<0.004 [<0.004]	**0.005** [a]	<0.004	<0.004	<0.002	**0.012** [a]	<0.004	<0.002
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	**0.008**	**0.017**	NA	**0.031**	**0.006**	**0.118**	**0.012 [0.01]**	**0.024**	**0.015**	**0.009**	**0.032**	**0.307** [b]	**0.244**	<0.010
Inorganics-Filtered																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**161**	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**265**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	**20.1** [a]	NA	NA	NA	**9.09** [a]	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	**53.4**	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	**61.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**3.75**	NA	NA	NA	**3.61**	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	**256** [a]	NA	NA	NA	**11.3**	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	NA	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	NA	**0.011** [ab]	**0.004**	**0.002**	**0.005 [0.005]**	**0.005**	**0.005**	**0.009**	NA	<0.002	<0.002	NA
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	NA	**0.123 J**	**0.580**	**0.134**	**0.172 [0.172]**	**0.163**	**0.241**	**0.230**	NA	**0.091**	**0.057**	NA
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	NA	**0.12**	**0.11**	**0.15**	**0.05 [0.05]**	<0.04	**0.05**	**0.05**	NA	**0.05**	<0.04	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005 [<0.0005]	<0.0005	<0.0005	<0.0005	NA	<0.0005	<0.0005	NA
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	NA	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	NA	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	NA	<0.005	<0.005	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	NA	<0.003	<0.003	<0.003	<0.003 [<0.003]	<0.003	<0.003	<0.003	NA	<0.003	<0.003	NA
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	NA	NA	**0.215** [a]	**0.342** [a]	**0.394** [a]	**0.113 [0.111]** [a]	**0.296** [a]	**0.125** [a]	**0.108** [a]	NA	**0.154** [a]	**0.067** [a]	NA
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	NA	<0.0001	<0.0001	<0.0001	<0.0001 [<0.0001]	<0.0001	<0.0001	<0.0001	NA	<0.0001	<0.0001	NA
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	NA	**0.015**	**0.009**	**0.033**	**0.006 [0.006]**	**0.026**	**0.007**	**0.017**	NA	**0.026**	**0.012**	NA
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	NA	<0.005	**0.009** [b]	<0.005	<0.005 [<0.005]	<0.005	<0.005	<0.005	NA	<0.005	<0.005	NA
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005 [<0.0005]	<0.0005	<0.0005	<0.0005	NA	<0.0005	<0.0005	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	NA	<0.004	<0.004	<0.004	<0.004 [<0.004]	<0.004	<0.004	<0.004	NA	<0.005	<0.004	NA
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	NA	**0.029**	<0.005	**0.008**	<0.005 [<0.005]	**0.012**	**0.007**	**0.008**	NA	**0.052**	**0.048**	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-13-45 72 - 77 12/13/13 Plant 2	MW-13-46 68 - 73 12/19/13 Plant 3	MW-13-47 99 - 119 11/15/13 Plant 3	MW-13-47 99 - 119 12/19/13 Plant 3	MW-13-48 65 - 70 12/19/13 Plant 3	MW-13-49 73 - 78 12/20/13 Plant 3	MW-13-50 85 - 107 12/16/13 Plant 6	MW-13-51 77 - 87 12/16/13 Plant 2	MW-13-52 70 - 80 12/20/13 Plant 6	MW-13-53 73 - 83 12/17/13 Plant 6	MW-19 55 - 65 06/04/13 Plant 3	MW-19 55 - 65 08/22/13 Plant 3	MW-19 55 - 65 11/14/13 Plant 3	MW-22 52.5 - 62.5 05/30/13 Plant 3
General Chemistry																					
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**408**	NA	NA	NA	**409**	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**408**	NA	NA	NA	**409**	NA	NA	NA	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	<2.5	NA	NA	NA	<2.5	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	**557** [a]	NA	NA	NA	**111**	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**677**	NA	NA	NA	**417**	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	**181**	NA	NA	NA	**45**	NA	NA	NA	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	**1,620 J** [a]	NA	NA	NA	**686** [a]	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**13.4**	NA	NA	NA	**5.4**	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	**41**	NA	NA	NA	**25**	NA	NA	NA	NA	NA
Field																					
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1.036**	NA	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.623**	NA	NA	**1.737**
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.63**	**1.52**	NA	**0.51**
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**83.3**	**-20.50**	NA	**-7.10**
pH	s.u.	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**7.26**	**7.38**	NA	**7.35**
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**18.22**	**24.38**	NA	**19.68**
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**7.53**	**529**	NA	**1.41**

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RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-22 52.5 - 62.5 08/21/13 Plant 3	MW-22 52.5 - 62.5 11/13/13 Plant 3	MW-23 52 - 62 05/31/13 Plant 3	MW-23 52 - 62 08/22/13 Plant 3	MW-23 52 - 62 11/14/13 Plant 3	MW-88-1 103.5 - 140 05/22/13 Plant 3	MW-88-1 103.5 - 140 08/15/13 Plant 3	MW-88-1 103.5 - 140 11/05/13 Plant 3	MW-91-2 68 - 78 06/07/13 Plant 3	MW-91-2 68 - 78 08/22/13 Plant 3	MW-91-2 68 - 78 11/12/13 Plant 3	MW-91-3 105 - 117 06/03/13 Plant 3	MW-91-3 105 - 117 08/16/13 Plant 3	MW-91-3 105 - 117 11/12/13 Plant 3
Volatile Organics																					
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5 [<5]	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2 [<2]	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-22 52.5 - 62.5 08/21/13 Plant 3	MW-22 52.5 - 62.5 11/13/13 Plant 3	MW-23 52 - 62 05/31/13 Plant 3	MW-23 52 - 62 08/22/13 Plant 3	MW-23 52 - 62 11/14/13 Plant 3	MW-88-1 103.5 - 140 05/22/13 Plant 3	MW-88-1 103.5 - 140 08/15/13 Plant 3	MW-88-1 103.5 - 140 11/05/13 Plant 3	MW-91-2 68 - 78 06/07/13 Plant 3	MW-91-2 68 - 78 08/22/13 Plant 3	MW-91-2 68 - 78 11/12/13 Plant 3	MW-91-3 105 - 117 06/03/13 Plant 3	MW-91-3 105 - 117 08/16/13 Plant 3	MW-91-3 105 - 117 11/12/13 Plant 3
Semivolatile Organics																					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	**1**	<1	<1	<1	**2 B**	<1	<1	<1	**1**	<1	<1	<1 [<1]	<1	<1
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2 [<2]	<2	<2
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1	<1	<1	<1	<1	<1	<1	<2	<1	<1	<1	<1.1 [<1]	<1	<1
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	**4**	<1	<1	**6 B**	<1	<1	**9**	<1	<1	**6 B**	<1	<1 [<1]	**10**	<1
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-22 52.5 - 62.5 08/21/13 Plant 3	MW-22 52.5 - 62.5 11/13/13 Plant 3	MW-23 52 - 62 05/31/13 Plant 3	MW-23 52 - 62 08/22/13 Plant 3	MW-23 52 - 62 11/14/13 Plant 3	MW-88-1 103.5 - 140 05/22/13 Plant 3	MW-88-1 103.5 - 140 08/15/13 Plant 3	MW-88-1 103.5 - 140 11/05/13 Plant 3	MW-91-2 68 - 78 06/07/13 Plant 3	MW-91-2 68 - 78 08/22/13 Plant 3	MW-91-2 68 - 78 11/12/13 Plant 3	MW-91-3 105 - 117 06/03/13 Plant 3	MW-91-3 105 - 117 08/16/13 Plant 3	MW-91-3 105 - 117 11/12/13 Plant 3
Inorganics																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002 [<0.002]	<0.005	<0.005
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	<0.002	**0.002**	**0.008**	**0.007**	**0.007**	**0.009**	**0.009**	**0.008**	**0.027** [ab]	**0.004**	**0.009**	<0.002 [<0.002]	<0.002	<0.002
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.106**	**0.103**	**0.080**	**0.093**	**0.087**	**0.092**	**0.094**	**0.091**	**0.137**	**0.117**	**0.112**	**0.024 [0.023]**	**0.020**	**0.023**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	<0.04	<0.04	<0.04	<0.04	<0.04	**0.09**	**0.09**	**0.09**	**0.04**	**0.05**	**0.08**	**0.21 [0.22]**	**0.228**	**0.20**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	<0.005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010 [<0.001]	<0.005	<0.0005
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	<0.005	**0.008**	<0.010	**0.010**	<0.005	<0.010	<0.005	<0.005	**0.350** [ab]	**0.098**	**0.058**	<0.010 [<0.01]	<0.005	<0.005
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	<0.01	<0.01	NA	NA	NA	NA	NA	NA	<0.01	<0.01	<0.01	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005	<0.005	<0.010	<0.005	<0.005	<0.010	<0.005	<0.005	<0.010	<0.005	<0.005	<0.010 [<0.01]	<0.005	<0.005
Copper	mg/L	1	0.02	- -	- -	- -	- -	<0.005	<0.005	**0.009**	<0.005	<0.005	**0.014**	<0.005	<0.005	**0.026** [b]	<0.005	**0.008**	<0.002 [0.006]	<0.005	<0.005
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003	<0.003	<0.002	<0.003	<0.003	<0.002	<0.003	<0.003	**0.009** [a]	<0.003	<0.003	<0.002 [<0.002]	<0.003	<0.003
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.821** [a]	**1.00** [a]	**0.054** [a]	**0.074** [a]	**0.056** [a]	**0.027**	**0.027**	**0.026**	**0.178** [a]	**0.049**	**0.052** [a]	**0.016 [0.015]**	**0.015**	**0.015**
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001 [<0.0001]	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.022**	**0.022**	**0.010**	**0.023**	**0.011**	<0.010	**0.010**	**0.010**	**0.042**	**0.015**	**0.015**	**0.011 [0.01]**	**0.009**	**0.010**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.007** [b]	<0.005 [<0.005]	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005 [<0.0005]	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.005	<0.004	<0.002	**0.008** [a]	<0.004	<0.002	<0.005	<0.004	<0.002	<0.005	<0.004	<0.002 [<0.002]	<0.005	<0.004
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	**0.006**	**0.006**	<0.010	**0.008**	<0.005	**0.012**	<0.005	**0.005**	**0.026**	<0.005	**0.006**	**0.034 [0.038]**	**0.024**	**0.025**
Inorganics-Filtered																					
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	**1.58** [a]	NA	NA	**3.14** [a]	NA	NA	NA	NA	NA	**2.78** [a]	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.002	NA	<0.005	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	NA	**0.006**	NA	NA	NA	NA	**0.008**	NA	**0.008**	NA	NA	NA
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	NA	**0.083**	NA	NA	NA	NA	**0.124**	NA	**0.109**	NA	NA	NA
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	NA	<0.04	NA	NA	NA	NA	**0.04**	NA	**0.05**	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	NA	<0.0005	NA	NA	NA	NA	<0.0010	NA	<0.0005	NA	NA	NA
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.010	NA	**0.009**	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.010	NA	<0.005	NA	NA	NA
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.002	NA	<0.005	NA	NA	NA
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	NA	<0.003	NA	NA	NA	NA	<0.002	NA	<0.003	NA	NA	NA
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	**0.817** [a]	NA	NA	**0.062** [a]	NA	NA	NA	NA	**0.058** [a]	**0.048**	**0.049**	NA	NA	NA
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	NA	<0.0001	NA	NA	NA	NA	<0.0001	NA	<0.0001	NA	NA	NA
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	NA	**0.013**	NA	NA	NA	NA	**0.014**	NA	**0.016**	NA	NA	NA
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.005	NA	<0.005	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	NA	<0.0005	NA	NA	NA	NA	<0.0005	NA	<0.0005	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.002	NA	<0.004	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	NA	<0.005	NA	NA	NA	NA	<0.010	NA	**0.009**	NA	NA	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-22 52.5 - 62.5 08/21/13 Plant 3	MW-22 52.5 - 62.5 11/13/13 Plant 3	MW-23 52 - 62 05/31/13 Plant 3	MW-23 52 - 62 08/22/13 Plant 3	MW-23 52 - 62 11/14/13 Plant 3	MW-88-1 103.5 - 140 05/22/13 Plant 3	MW-88-1 103.5 - 140 08/15/13 Plant 3	MW-88-1 103.5 - 140 11/05/13 Plant 3	MW-91-2 68 - 78 06/07/13 Plant 3	MW-91-2 68 - 78 08/22/13 Plant 3	MW-91-2 68 - 78 11/12/13 Plant 3	MW-91-3 105 - 117 06/03/13 Plant 3	MW-91-3 105 - 117 08/16/13 Plant 3	MW-91-3 105 - 117 11/12/13 Plant 3
General Chemistry																					
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	**216**	NA	NA	**356**	NA	NA	NA	NA	NA	**338**	NA	NA	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	**140**	NA	NA	**152**	NA	NA	NA	NA	NA	**127**	NA	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	<0.5	NA	NA	<0.5	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	**158**	NA	NA	**199**	NA	NA	NA	NA	NA	**190**	NA	NA	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																					
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	**1.619**	NA	NA	**1.059**	NA	NA	**1.086**	NA	NA	**1.104**	NA	NA	**0.882**	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	**1.156**	NA	NA	**0.744**	NA	NA	**1.120**	NA	NA	**0.962**	NA	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.26**	NA	**0.24**	**0.13**	NA	**0.42**	**0.26**	NA	**0.09**	**0.21**	NA	**1.05**	**0.26**	NA
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**-20.60**	NA	**-86.90**	**113.4**	NA	**-28.80**	**-73.90**	NA	**-126.70**	**-116.00**	NA	**-75.10**	**-82.80**	NA
pH	s.u.	- -	- -	- -	- -	- -	- -	**6.67**	NA	**7.22**	**7.33**	NA	**8.97**	**7.28**	NA	**7.20**	**7.37**	NA	**7.18**	**7.25**	NA
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**16.98**	NA	**17.77**	**20.54**	NA	**14.20**	**12.59**	NA	**18.25**	**17.86**	NA	**13.82**	**13.95**	NA
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**0.63**	NA	**1.74**	**59.4**	NA	**2.00**	**2.42**	NA	**196**	**6.12**	NA	**5.58**	**4.19**	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-91-4 116 - 132.5 05/22/13 Plant 3	MW-91-4 116 - 132.5 08/14/13 Plant 3	MW-91-4 116 - 132.5 11/05/13 Plant 3	MW-91-5 112.5 - 128 05/22/13 Plant 3	MW-91-5 112.5 - 128 08/15/13 Plant 3	MW-91-5 112.5 - 128 11/08/13 Plant 3	MW-91-6 82 - 98 04/04/13 Plant 3	MW-91-6 82 - 98 08/15/13 Plant 3	MW-91-6 82 - 98 11/15/13 Plant 3	P6-SB-35 3 - 8 06/05/13 Plant 6	P6-SB-35 3 - 8 08/19/13 Plant 6	P6-SB-35 3 - 8 11/12/13 Plant 6	BWL-10-10 130 12/05/13 Plant 3
Volatile Organics																				
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5 [<5]	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	**2**	**1**	**2**	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	**23**	**19**	**18**	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	**17** [ab]	**10** [a]	**11** [a]	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 [<10]	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1	<1	<1	<1	**1**	<1 [<1]	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2 [<2]	<2	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-91-4 116 - 132.5 05/22/13 Plant 3	MW-91-4 116 - 132.5 08/14/13 Plant 3	MW-91-4 116 - 132.5 11/05/13 Plant 3	MW-91-5 112.5 - 128 05/22/13 Plant 3	MW-91-5 112.5 - 128 08/15/13 Plant 3	MW-91-5 112.5 - 128 11/08/13 Plant 3	MW-91-6 82 - 98 04/04/13 Plant 3	MW-91-6 82 - 98 08/15/13 Plant 3	MW-91-6 82 - 98 11/15/13 Plant 3	P6-SB-35 3 - 8 06/05/13 Plant 6	P6-SB-35 3 - 8 08/19/13 Plant 6	P6-SB-35 3 - 8 11/12/13 Plant 6	BWL-10-10 130 12/05/13 Plant 3
Semivolatile Organics																				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [1]	<1	<1	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<2 J	<1	<1	<1 [<1]	<1	<1	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	**1**	<1	<1	<1	<1	<1	<2	<1	<1	**1 [2]**	**1**	<1	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	<1	<1	<1	<1	<1	<1	**8**	<1	<1	<1 [<1]	<1	<1	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2 [<2]	<2	<2	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	<1	<1	<1	<1	<1	<2	<2	<1	<1	<1 [<1]	<1	<1	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	<1	**6**	<1	<1	**6**	<1	<2	**8**	<1	<1 [<1]	**10**	<1	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	<1	<1	<1	**1 B**	<1	<1	<1	<1	<1	**1 [1]**	<1	<1	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1 [<1]	<1	<1	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 [<1]	<1	<1	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: / Sample Depth (ft): / Date Collected: / Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-91-4 116 - 132.5 05/22/13 Plant 3	MW-91-4 116 - 132.5 08/14/13 Plant 3	MW-91-4 116 - 132.5 11/05/13 Plant 3	MW-91-5 112.5 - 128 05/22/13 Plant 3	MW-91-5 112.5 - 128 08/15/13 Plant 3	MW-91-5 112.5 - 128 11/08/13 Plant 3	MW-91-6 82 - 98 04/04/13 Plant 3	MW-91-6 82 - 98 08/15/13 Plant 3	MW-91-6 82 - 98 11/15/13 Plant 3	P6-SB-35 3 - 8 06/05/13 Plant 6	P6-SB-35 3 - 8 08/19/13 Plant 6	P6-SB-35 3 - 8 11/12/13 Plant 6	BWL-10-10 130 12/05/13 Plant 3
Inorganics																				
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	<0.005	<0.002 [<0.002]	<0.005	<0.005	<0.005
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	**0.012** [ab]	**0.014** [ab]	**0.011** [ab]	**0.010**	**0.010**	**0.011** [ab]	**0.011** [ab]	**0.008**	**0.010**	**0.009 [0.008]**	**0.015** [ab]	**0.008**	<0.002
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.097**	**0.099**	**0.087**	**0.337**	**0.342**	**0.331**	**0.129**	**0.147**	**0.132**	**0.017 [0.014]**	**0.016**	**0.018**	**0.117**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.35**	**0.343**	**0.35**	**0.09**	**0.10**	**0.10**	**0.10**	**0.10**	**0.10**	**0.14 [0.14]**	**0.19**	**0.17**	**0.29**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0010	<0.005	<0.0005	<0.0010	<0.005	<0.0005	**0.0023**	<0.005	<0.0005	<0.0010 [<0.001]	<0.005	<0.0005	<0.0005
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	<0.010	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010 [<0.01]	**0.010**	**0.014**	<0.005
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.010	<0.005	<0.005	<0.010	<0.005	<0.005	<0.010	<0.005	<0.005	<0.010 [<0.01]	<0.005	<0.005	<0.005
Copper	mg/L	1	0.02	- -	- -	- -	- -	**0.006**	<0.005	<0.005	**0.002**	<0.005	<0.005	**0.005**	<0.005	<0.005	**0.006 [0.005]**	**0.007**	**0.007**	<0.005
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.002	<0.003	<0.003	<0.002	<0.003	<0.003	**0.006** [a]	<0.003	<0.003	<0.002 [<0.002]	<0.003	<0.003	<0.003
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.360** [a]	**0.356** [a]	**0.323** [a]	**0.085** [a]	**0.081** [a]	**0.088** [a]	**0.145** [a]	**0.152** [a]	**0.146** [a]	<0.010 [<0.01]	<0.005	**0.007**	**0.330** [a]
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001 [<0.0001]	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.011**	**0.015**	**0.012**	<0.010	**0.008**	**0.007**	<0.010	**0.009**	**0.011**	<0.010 [<0.01]	<0.005	**0.006**	**0.007**
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	0.005 [<0.005]	<0.005	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005 [<0.0005]	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.002	<0.005	<0.004	<0.002	<0.005	<0.004	<0.002	<0.005	<0.004	**0.020 [0.018]** [a]	**0.027** [a]	**0.021** [a]	<0.004
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	**0.013**	**0.007**	**0.013**	**0.021**	<0.005	**0.006**	**0.087**	**0.011**	**0.005**	<0.010 [<0.01]	**0.010**	<0.005	<0.005
Inorganics-Filtered																				
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	**4.93** [a]	NA	NA	NA	NA	NA	NA	NA	NA	**0.09**	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	<0.005
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	**0.010**	NA	NA	NA	**0.010**	NA	NA	NA	NA	**0.007**	<0.002
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	**0.127**	NA	NA	NA	NA	NA	**0.091**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	**0.10**	NA	NA	NA	NA	NA	**0.34**
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.0010	NA	NA	NA	NA	NA	<0.0005
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.005	NA	NA	NA	NA	NA	<0.005
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.010	NA	NA	NA	NA	NA	<0.005
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	<0.005
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	<0.003	NA	NA	NA	<0.002	NA	NA	NA	NA	<0.003	<0.003
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	**0.356** [a]	NA	NA	NA	NA	**0.142** [a]	NA	NA	NA	<0.005	NA	**0.332** [a]
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	NA	NA	NA	NA	<0.0001	NA	NA	NA	NA	NA	<0.0001
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.010	NA	NA	NA	NA	NA	**0.007**
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.002	NA	NA	NA	NA	NA	<0.005
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.0002	NA	NA	NA	NA	NA	<0.0005
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	<0.004	NA	NA	NA	<0.002	NA	NA	NA	NA	**0.020** [a]	<0.004
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	<0.010	NA	NA	NA	NA	NA	<0.005

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	MW-91-4 116 - 132.5 05/22/13 Plant 3	MW-91-4 116 - 132.5 08/14/13 Plant 3	MW-91-4 116 - 132.5 11/05/13 Plant 3	MW-91-5 112.5 - 128 05/22/13 Plant 3	MW-91-5 112.5 - 128 08/15/13 Plant 3	MW-91-5 112.5 - 128 11/08/13 Plant 3	MW-91-6 82 - 98 04/04/13 Plant 3	MW-91-6 82 - 98 08/15/13 Plant 3	MW-91-6 82 - 98 11/15/13 Plant 3	P6-SB-35 3 - 8 06/05/13 Plant 6	P6-SB-35 3 - 8 08/19/13 Plant 6	P6-SB-35 3 - 8 11/12/13 Plant 6	BWL-10-10 130 12/05/13 Plant 3
General Chemistry																				
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	**419**	NA	NA	NA	NA	NA	NA	NA	NA	**89**	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	**120**	NA	NA	NA	NA	NA	NA	NA	NA	<2	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	**1.6**	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	175	NA	NA	NA	NA	NA	NA	NA	NA	**117**	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field																				
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	NA	**1.453**	NA	NA	**1.231**	NA	NA	**1.447**	NA	NA	NA	**0.673**	**1.029**
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	**1.186**	NA	NA	**1.221**	NA	NA	NA	NA	NA	**0.472**	NA	NA	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.27**	**0.20**	NA	**0.54**	**0.31**	NA	NA	**0.23**	NA	**0.22**	NA	**5.87**	**2.70**
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**-27.70**	**-81.30**	NA	**-108.60**	**-128.00**	NA	NA	**-93.50**	NA	**276.9**	NA	**-65.2**	**-5.3**
pH	s.u.	- -	- -	- -	- -	- -	- -	**8.83**	**6.74**	NA	**8.02**	**7.13**	NA	NA	**6.99**	NA	**9.89**	NA	**9.84**	**7.03**
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**13.86**	**17.23**	NA	**13.32**	**14.51**	NA	NA	**13.33**	NA	**17.12**	NA	**9.07**	**8.64**
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**4.42**	**6.06**	NA	**5.22**	**5.69**	NA	NA	**4.67**	NA	**5**	NA	**9.81**	**17.7**

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID:								Lansing Municipal Water Supply Wells				
Sample Depth (ft):								BWL-10-10	BWL-10-10	BWL-10-10	BWL-10-10	TWP-90-4
Date Collected:								165	195	220	260	
Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	12/05/13 Plant 3	12/06/13 Plant 3	12/06/13 Plant 3	12/06/13 Plant 3	12/05/13 Plant 3
Volatile Organics												
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2(A)	ID	1,200(S)	1,230	NA	280	<1	<1	<1	<1	<1
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.05(A)	5.7(X)	15,000	4.20E+06	ID	16	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	600(A)	13	1.60E+05(S)	1.56E+05	NA	32,000	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	75(A)	17	74,000(S)	73,800	NA	380	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	85	2,800(X)	NLV	9.00E+08	1.40E+08	- -	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/L	200(A)	89	1.30E+06(S)	1.33E+06	ID	71,000	<1	<1	<1	<1	<1
2-Hexanone	ug/L	1,000	ID	8.70E+06	1.60E+07	NA	67,000	<10	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	ug/L	8.5	78(X)	77,000	2.97E+06	ID	300	<1	<1	<1	<1	<1
Acetone	ug/L	730	1,700	1.00E+09(D,S)	1.00E+09	1.50E+07	3.40E+07	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	ug/L	5(A)	330(X)	1.10E+05	4.42E+06	NA	480	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	80(A,W)	ID	37,000	6.74E+06	ID	170	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	880	740	2.30E+06	5.06E+06	3.80E+05	18,000	<1	<1	<1	<1	<1
Bromoform	ug/L	80(A,W)	ID	3.10E+06(S)	3.10E+06	ID	11,000	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	7(A)	130	1,300	2.25E+06	97,000	1,600	<1	<1	<1	<1	<1
Bromomethane (Methyl bromide)	ug/L	10	35	9,000	1.45E+07	ID	140	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5(A)	360(X)	59,000	8.52E+06	2.50E+06	210	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	800	ID	5.50E+05	1.19E+06	13,000	9,900	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5(A)	45(X)	2,400	7.93E+05	ID	38	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	70(A)	620	2.10E+05	3.50E+06	5.30E+05	350	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	100(A)	25	4.70E+05(S)	4.72E+05	1.60E+05	4,600	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100(A)	1,500(X)	2.00E+05	6.30E+06	2.30E+05	1,500	<1	<1	<1	<1	<1
Chloroform (Trichloromethane)	ug/L	80(A,W)	350	1.80E+05	7.92E+06	ID	720	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5(A)	200(X)	4,900	1.10E+06	ID	41	<1	<1	<1	<1	<1
Chloromethane (Methyl chloride)	ug/L	260	ID	45,000	6.34E+06	36,000	1,100	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5(A)	60(X)	1.70E+05	2.00E+05	ID	460	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1
Vinyl chloride	ug/L	2(A)	13(X)	13,000	2.76E+06	33,000	52	<1	<1	**2** [a]	**2** [a]	<1
Chloroethane	ug/L	430	1,100(X)	5.70E+06(S)	5.74E+06	1.10E+05	1.80E+05	<1	<1	<1	<1	<1
Dichlorodifluoromethane (CFC-12)	ug/L	1,700	ID	3.00E+05(S)	3.00E+05	ID	29,000	<1	<1	<1	<1	<1
Benzene	ug/L	5(A)	200(X)	35,000	1.75E+06	68,000	140	<1	<1	<1	<1	<1
Methyl acetate	ug/L	- -	- -	- -	- -	- -	- -	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	74(E)	18	1.70E+05(S)	1.69E+05	43,000	2,600	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5(A)	1,500(X)	1.40E+06	1.70E+07	ID	4,200	<1	<1	<1	<1	<1
Styrene	ug/L	100(A)	80(X)	3.10E+05(S)	3.10E+05	1.40E+05	4,100	<1	<1	<1	<1	<1
Toluene	ug/L	790(E)	270	5.30E+05(S)	5.26E+05	61,000	1.50E+05	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	8.5	9(X)	26,000	2.80E+06	1.30E+05	450	<1	<1	<1	<1	<1
Methyl tert butyl ether (MTBE)	ug/L	40(E)	7,100(X)	4.70E+07(S)	4.68E+07	ID	1.00E+06	<1	<1	<1	<1	<1
Trichlorofluoromethane (CFC-11)	ug/L	2,600	NA	1.10E+06(S)	1.10E+06	ID	1.20E+05	<1	<1	<1	<1	<1
Trifluorotrichloroethane (Freon 113)	ug/L	1.70E+05(S)	32	1.70E+05(S)	1.70E+05	ID	7,500	<1	<1	<1	<1	<1
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	13,000	2,200	2.40E+08(S)	2.40E+08	ID	1.80E+07	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	1,800	ID	2.00E+07(S)	2.00E+07	ID	4.40E+06	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/L	70(A)	99(X)	3.00E+05(S)	3.00E+05	NA	570	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	5(A)	230(X)	36,000	2.80E+06	5.50E+05	290	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	6.6	28	41,000	1.11E+05	ID	230	<1	<1	<1	<1	<1
Cyclohexane	ug/L	- -	- -	- -	- -	- -	8,100	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	- -	- -	- -	- -	- -	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	80(A,W)	ID	1.10E+05	2.60E+06	ID	330	<1	<1	<1	<1	<1
Isopropyl benzene	ug/L	800	28	56,000(S)	56,000	29,000	53	<1	<1	<1	<1	<1
o-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<1	<1	<1	<1	<1
m&p-Xylene	ug/L	280(E)	41	1.90E+05(S)	1.86E+05	70,000	10,000d	<2	<2	<2	<2	<2

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	BWL-10-10 165 12/05/13 Plant 3	BWL-10-10 195 12/06/13 Plant 3	BWL-10-10 220 12/06/13 Plant 3	BWL-10-10 260 12/06/13 Plant 3	TWP-90-4 12/05/13 Plant 3
Semivolatile Organics												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	ug/L	120	5	NLV	8.00E+05	ID	- -	NA	NA	NA	NA	NA
2,4-Dichlorophenol	ug/L	73	11	NLV	4.50E+06	ID	- -	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/L	730	NA	NLV	1.20E+06	ID	- -	NA	NA	NA	NA	NA
2,4-Dimethylphenol	ug/L	370	380	NLV	7.87E+06	ID	- -	NA	NA	NA	NA	NA
2,4-Dinitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/L	7.7	NA	NLV	2.70E+05	ID	- -	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/L	1,800	NA	ID	6,740	ID	- -	NA	NA	NA	NA	NA
2-Chlorophenol	ug/L	45	18	1.10E+06	2.20E+07	ID	3.30E+05	NA	NA	NA	NA	NA
2-Methylnaphthalene	ug/L	260	19	25,000(S)	24,600	ID	3,900	NA	NA	NA	NA	NA
2-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA
2-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
2-Nitrophenol	ug/L	20	ID	NLV	2.50E+06	ID	- -	NA	NA	NA	NA	NA
3&4-Methylphenol	ug/L	370	30(M)	NLV	2.80E+07	NA	- -	NA	NA	NA	NA	NA
Naphthalene	ug/L	520	11	31,000(S)	31,000	NA	120	NA	NA	NA	NA	NA
3-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	ug/L	20(M)	NA	NLV	2.00E+05	ID	- -	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/L	150	7.4	NLV	3.90E+06	ID	- -	NA	NA	NA	NA	NA
4-Chloroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
4-Nitroaniline	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
4-Nitrophenol	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Anthracene	ug/L	43(S)	ID	43(S)	43.4	ID	3.70E+06	NA	NA	NA	NA	NA
Acenaphthene	ug/L	1,300	38	4,200(S)	4,240	ID	2.30E+05	NA	NA	NA	NA	NA
Acenaphthylene	ug/L	52	ID	3,900(S)	3,930	ID	62,000	NA	NA	NA	NA	NA
Acetophenone	ug/L	1,500	ID	6.10E+06(S)	6.10E+06	ID	9.60E+06	NA	NA	NA	NA	NA
Atrazine	ug/L	3(A)	7.3	NLV	70,000	ID	- -	NA	NA	NA	NA	NA
Benzaldehyde	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	2.1	ID	NLV	9.4	ID	- -	NA	NA	NA	NA	NA
Benzo(a)pyrene	ug/L	5(A)	ID	NLV	1.62	ID	- -	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ug/L	1.5(S,AA)	ID	ID	1.5	ID	- -	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	ug/L	1(M); 0.26(S)	ID	NLV	0.26	ID	- -	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	ug/L	1(M); 0.8(S)	NA	NLV	0.8	ID	- -	NA	NA	NA	NA	NA
Biphenyl (1,1-Biphenyl)	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/L	2	1(M)	2.10E+05	1.72E+07	1.70E+07(S)	1,100	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	6(A)	25	NLV	340	NA	- -	NA	NA	NA	NA	NA
Butyl benzylphthalate (BBP)	ug/L	1,200	67(X)	NLV	2,690	ID	- -	NA	NA	NA	NA	NA
Caprolactam	ug/L	5,800	NA	NLV	5.25E+09	NA	- -	NA	NA	NA	NA	NA
Carbazole	ug/L	85	10(M)	NLV	7,480	ID	- -	NA	NA	NA	NA	NA
Chrysene	ug/L	1.6(S)	ID	ID	1.6	ID	- -	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	2(M)	ID	NLV	2.49	ID	- -	NA	NA	NA	NA	NA
Dibenzofuran	ug/L	ID	4	10,000(S)	10,000	ID	96	NA	NA	NA	NA	NA
Diethyl phthalate	ug/L	5,500	110	NLV	1.08E+06	NA	- -	NA	NA	NA	NA	NA
Dimethyl phthalate	ug/L	73,000	NA	NLV	4.19E+06	NA	- -	NA	NA	NA	NA	NA
Di-n-butylphthalate (DBP)	ug/L	880	9.7	NLV	11,200	NA	- -	NA	NA	NA	NA	NA
Di-n-octyl phthalate (DnOP)	ug/L	130	ID	NLV	3,000	ID	- -	NA	NA	NA	NA	NA
Fluoranthene	ug/L	210(S)	1.6	210(S)	206	ID	- -	NA	NA	NA	NA	NA
Fluorene	ug/L	880	12	2,000(S)	1,980	ID	3.00E+05	NA	NA	NA	NA	NA
Hexachlorobenzene	ug/L	1(A)	0.2(M); 0.0003	3,000	6,200	- -	8.1	NA	NA	NA	NA	NA
Hexachlorobutadiene	ug/L	15	0.053	3,200(S)	3,230	ID	28	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	ug/L	50(A)	ID	420	1,800	ID	50d	NA	NA	NA	NA	NA
Hexachloroethane	ug/L	7.3	6.7(X)	50,000(S)	50,000	ID	180	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	ug/L	2(M); 0.022(S)	ID	NLV	0.022	ID	- -	NA	NA	NA	NA	NA
Isophorone	ug/L	770	1,300(X)	NLV	1.20E+07	ID	- -	NA	NA	NA	NA	NA
Nitrobenzene	ug/L	3.4	180(X)	5.50E+05	2.09E+06	NA	6,600	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	ug/L	5(M)	NA	NLV	9.89E+06	ID	- -	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine	ug/L	270	NA	NLV	35,100	ID	- -	NA	NA	NA	NA	NA
Pentachlorophenol	ug/L	1(A)	1.8(G,X)	NLV	1.85E+06	ID	- -	NA	NA	NA	NA	NA
Phenanthrene	ug/L	52	2(M)	1,000(S)	1,000	ID	480	NA	NA	NA	NA	NA
Phenol	ug/L	4,400	450	NLV	8.28E+07	NA	- -	NA	NA	NA	NA	NA
Pyrene	ug/L	140(S)	ID	140(S)	135	ID	1.70E+06	NA	NA	NA	NA	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	BWL-10-10 165 12/05/13 Plant 3	BWL-10-10 195 12/06/13 Plant 3	BWL-10-10 220 12/06/13 Plant 3	BWL-10-10 260 12/06/13 Plant 3	TWP-90-4 12/05/13 Plant 3
Inorganics												
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Iron	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Sodium	mg/L	230	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Antimony	mg/L	0.006	0.13	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.005	<0.005
Arsenic	mg/L	0.01	0.01	- -	- -	- -	- -	<0.002	<0.002	<0.002	<0.002	**0.007**
Barium	mg/L	2	1.2	- -	- -	- -	- -	**0.094**	**0.103**	**0.094**	**0.094**	**0.196**
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	**0.36**	**0.26**	**0.34**	**0.44**	**0.07**
Cadmium	mg/L	0.005	0.0045	- -	- -	- -	- -	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium	mg/L	0.1	0.16	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium VI (hexavalent)	mg/L	0.1	0.011	- -	- -	- -	- -	NA	NA	NA	NA	NA
Cobalt	mg/L	0.04	0.1	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	mg/L	1	0.02	- -	- -	- -	- -	<0.005	**0.006**	<0.005	<0.005	**0.007**
Lead	mg/L	0.004	0.044	- -	- -	- -	- -	<0.003	<0.003	<0.003	<0.003	<0.003
Manganese	mg/L	0.05	4.5	- -	- -	- -	- -	**0.329** [a]	**0.299** [a]	**0.195** [a]	**0.170** [a]	**0.017**
Mercury	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	0.1	0.12	- -	- -	- -	- -	**0.007**	**0.010**	**0.009**	**0.008**	<0.005
Selenium	mg/L	0.05	0.005	- -	- -	- -	- -	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	mg/L	0.034	0.0002	- -	- -	- -	- -	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium	mg/L	0.0045	0.027	- -	- -	- -	- -	<0.004	<0.004	<0.004	<0.004	<0.004
Zinc	mg/L	2.4	0.26	- -	- -	- -	- -	<0.005	**0.008**	<0.005	<0.005	**0.012**
Inorganics-Filtered												
Calcium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Calcium (dissolved)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Iron (dissolved)	mg/L	0.3	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Magnesium	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Magnesium (dissolved)	mg/L	400	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Potassium	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Sodium (dissolved)	mg/L	120	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Antimony (dissolved)	mg/L	0.006	0.13	- -	- -	- -	- -	NA	NA	NA	NA	NA
Arsenic (dissolved)	mg/L	0.01	0.01	- -	- -	- -	- -	NA	NA	NA	NA	NA
Barium (dissolved)	mg/L	2	1.2	- -	- -	- -	- -	NA	NA	NA	NA	NA
Boron	mg/L	0.5	7.2	- -	- -	- -	- -	NA	NA	NA	NA	NA
Cadmium (dissolved)	mg/L	0.005	0.0045	- -	- -	- -	- -	NA	NA	NA	NA	NA
Chromium Total	mg/L	0.1	0.16	- -	- -	- -	- -	NA	NA	NA	NA	NA
Cobalt (dissolved)	mg/L	0.04	0.1	- -	- -	- -	- -	NA	NA	NA	NA	NA
Copper (dissolved)	mg/L	1	0.02	- -	- -	- -	- -	NA	NA	NA	NA	NA
Lead (dissolved)	mg/L	0.004	0.044	- -	- -	- -	- -	NA	NA	NA	NA	NA
Manganese (dissolved)	mg/L	0.05	4.5	- -	- -	- -	- -	NA	NA	NA	NA	NA
Mercury (dissolved)	mg/L	0.002	0.0000013	0.056	0.056	- -	- -	NA	NA	NA	NA	NA
Nickel (dissolved)	mg/L	0.1	0.12	- -	- -	- -	- -	NA	NA	NA	NA	NA
Selenium (dissolved)	mg/L	0.05	0.005	- -	- -	- -	- -	NA	NA	NA	NA	NA
Silver (dissolved)	mg/L	0.034	0.0002	- -	- -	- -	- -	NA	NA	NA	NA	NA
Vanadium (dissolved)	mg/L	0.0045	0.027	- -	- -	- -	- -	NA	NA	NA	NA	NA
Zinc (dissolved)	mg/L	2.4	0.26	- -	- -	- -	- -	NA	NA	NA	NA	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth (ft): Date Collected: Sample Name:	Units	MI GW (DEQ2011) Res DW	MI GW (DEQ2011) GSI	MI GW (DEQ2011) Non-Res GVIIC	MI GW (DEQ2011) Water Solubility	MI GW (DEQ2011) Flammability and Explosivity	MI GW (DEQ2013) Non-Res GWVI	BWL-10-10 165 12/05/13 Plant 3	BWL-10-10 195 12/06/13 Plant 3	BWL-10-10 220 12/06/13 Plant 3	BWL-10-10 260 12/06/13 Plant 3	TWP-90-4 12/05/13 Plant 3
General Chemistry												
Alkalinity, bicarbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Alkalinity, carbonate	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Alkalinity, total (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Bicarbonate (as CaCO3)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Bromide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Carbon dioxide	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Chloride	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Hardness	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	10	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Sulfate	mg/L	250	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Total dissolved solids (TDS)	mg/L	500	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Total organic carbon (TOC)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Total suspended solids (TSS)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Field												
Conductance, specific	mS/cm	- -	- -	- -	- -	- -	- -	**1.023**	**1.191**	**1.201**	**1.263**	NA
Conductivity, field	mS/cm	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Dissolved oxygen (DO)	mg/L	- -	- -	- -	- -	- -	- -	NA	NA	NA	NA	NA
Dissolved oxygen (DO), field	mg/L	- -	- -	- -	- -	- -	- -	**0.32**	**0.67**	**0.41**	**2.8**	NA
Oxidation reduction potential (ORP), field	millivolts	- -	- -	- -	- -	- -	- -	**-14.6**	**14**	**-16.3**	**-34.1**	NA
pH	s.u.	- -	- -	- -	- -	- -	- -	**7.09**	**7.14**	**7.09**	**7.09**	NA
Temperature, field	Deg C	- -	- -	- -	- -	- -	- -	**10.62**	**2.02**	**4.09**	**8.20**	NA
Turbidity (field)	NTU	- -	- -	- -	- -	- -	- -	**6.34**	**3.13**	**2.34**	**1.76**	NA

Table 3
Summary of Groundwater Monitoring Well Sample Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Table Notes:

-- Shading indicates result exceeding one or more MDEQ Part 201 Generic Cleanup Criteria and Screening Levels, Dated March 25, 2011.
-- Bold fonts represent data where detections were noted above the MDL but below MDEQ Part 201 Generic Cleanup Criteria.
-- Data shown in [ ] represent duplicate sample analytical results.
mg/L - milligrams per liter
µg/L - micrograms per liter
** - Sample collected by others and analytical reports provided to ARCADIS. This data was not validated
[a] - Sample exceeds Residential Drinking Water Criteria
[b] - Sample exceeds Groundwater Surface Water Interface Criteria
[c] - Sample exceeds Non-Residential Groundwater Volatilization to Indoor Air Inhalation Criteria
[d] - Sample exceeds Water Solubility Criteria
[e] - Sample exceeds Flammability and Explosivity Screening Levels
[f] - Sample exceeds Non-Residential Groundwater Concentrations for Vapor Intrusion

MDEQ Criteria Footnotes: (as revised December 30, 2013)

- - = Not listed in the MDEQ Criteria Tables.
ID = Insufficient data to develop a criterion.
Na = Not available.
NLV = Not likely to volatilize.
d = If the calculated criterion is below State of Michigan Safe Drinking Water Standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005, the criterion defaults to the Safe Drinking Water Standard.
A = Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
D = Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
E = Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).
F = Criterion is based on adverse impacts to plant life and phytotoxicity.
G = Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. A hardness value of 257 mg/L was used.
L = Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.
M = Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
S = Criterion defaults to the hazardous substance-specific water solubility limit.
W = Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L.
X = The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.
AA = Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.
HH = The residential criterion for sodium is 230,000 ug/L in accordance with the Sodium Advisory Cuoncil recommendation and revised Groundwater Discharge Standards.

Lab and Validation Data Qualifiers:

B = Compounds also found in associated method blank
D = Compound quantified using a secondary dilution
E = Analyte exceeds calibration range
I = Matrix interference with internal standard
J = The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only.
K = Elevated reporting limits due to low total solids
N = Normal Sample
p = Benzo(b)fluoranthene and Benzo(k)fluoranthene integrated as one peak
R = Rejected
S = Surrogate recovery outside of control limits
T = No correction for total solids
UB = Compound considered non-detect at the listed value due to associated blank contamination.
UJ = The analyte was not detected above the quantitation limits, however the quantitation limits is estimated
U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
X = Elevated reporting limit due to matrix interference
z = Sample preserved in the lab

Table 4
Summary of Deep Aquifer Groundwater Elevation Measurements, December 2013
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Well ID	Hydrostratigraphic Unit	TOC Elevation	Screen Interval (ft msl)			Depth to Groundwater	Groundwater Elevation	Effective Head*
			Top	Bottom	Midpoint			
		feet msl	feet bgs	feet bgs	feet bgs	feet toc	feet msl	feet msl
MW-12-20	Deep Overburden	864.20	786.45	781.45	783.95	69.75	794.45	-
MW-12-21	Deep Overburden	864.50	791.45	786.45	788.95	67.54	796.96	-
MW-13-23	Deep Overburden	864.31	792.45	787.45	789.95	69.96	794.35	-
MW-13-24	Deep Overburden	864.35	792.48	787.48	789.98	67.68	796.67	-
MW-13-25	Deep Overburden	863.77	793.49	788.49	790.99	68.63	795.14	-
MW-13-26	Deep Overburden	863.95	789.67	784.67	787.17	68.07	795.88	-
MW-13-27	Deep Overburden	864.50	794.54	789.54	792.04	69.58	794.92	-
MW-13-29	Deep Overburden	862.81	791.81	786.81	789.31	68.20	794.61	-
MW-13-30	Deep Overburden	864.53	789.66	784.66	787.16	70.05	794.48	-
MW-13-48	Deep Overburden	854.83	787.17	782.17	784.67	60.55	794.28	-
Weathered Bedrock								
MW-13-22	Weathered Bedrock	864.37	772.50	767.50	770.00	72.29	792.08	-
MW-13-34	Weathered Bedrock	853.92	777.82	772.82	775.32	69.40	784.52	-
MW-13-42	Weathered Bedrock	861.61	790.03	785.03	787.53	73.40	788.21	-
MW-13-43	Weathered Bedrock	863.82	788.97	783.97	786.47	69.95	793.87	-
MW-13-45	Weathered Bedrock	863.80	789.54	784.54	787.04	69.69	794.11	-
MW-13-46	Weathered Bedrock	854.54	784.12	779.12	781.62	66.25	788.29	-
MW-13-49	Weathered Bedrock	853.01	777.55	772.55	775.05	69.40	783.61	-
MW-13-51	Weathered Bedrock	875.34	795.51	785.51	790.51	75.95	799.39	-
MW-13-52	Weathered Bedrock	872.50	799.84	789.84	794.84	74.50	798.00	-
MW-13-53	Weathered Bedrock	875.56	800.10	790.10	795.10	77.55	798.01	-
Bedrock								
MW-04-01(3)	Bedrock-Saginaw Fm	862.61	767.93	757.93	762.93	54.94	807.67	794.60
MW-04-01(6)	Bedrock-Saginaw Fm	866.85	789.15	779.15	784.15	73.80	793.05	771.50
MW-04-02(3)	Bedrock- Grand River Fm	861.09	735.26	725.26	730.26	67.60	793.49	Baseline**
MW-04-04R	Bedrock-Saginaw Fm	873.31	788.64	760.64	774.64	80.05	793.26	775.51
MW-04-06R	Bedrock-Saginaw Fm	861.56	784.59	759.09	771.84	69.40	792.16	775.53
MW-12-01	Bedrock-Saginaw Fm	867.94	778.46	755.46	766.96	81.00	786.94	772.26
MW-12-02	Bedrock- Grand River Fm	853.91	764.88	741.88	753.38	72.00	781.91	-
MW-12-03	Bedrock-Saginaw Fm	859.10	799.71	776.71	788.21	66.20	792.90	769.72
MW-12-04	Bedrock- Grand River Fm	844.08	767.26	744.26	755.76	52.78	791.30	-
MW-12-05	Bedrock-Saginaw Fm	865.19	787.23	763.23	775.23	77.70	787.49	769.50
MW-12-06	Bedrock-Saginaw Fm	864.64	781.09	762.19	771.64	76.25	788.39	771.84
MW-13-28	Bedrock- Grand River Fm	864.42	762.61	746.11	754.36	73.01	791.41	-
MW-13-37	Bedrock-Saginaw Fm	866.02	766.75	751.75	759.25	74.22	791.80	780.20
MW-13-38	Bedrock-Saginaw Fm	866.47	756.71	739.71	748.21	75.08	791.39	784.21
MW-13-39B	Bedrock- Grand River Fm	860.20	760.33	745.33	752.83	68.48	791.72	-
MW-13-44	Bedrock-Saginaw Fm	864.24	765.03	746.03	755.53	81.98	782.26	772.15
MW-13-47	Bedrock- Grand River Fm	853.74	752.89	732.89	742.89	68.85	784.89	-
MW-13-50	Bedrock-Saginaw Fm	872.85	784.93	762.93	773.93	84.60	788.25	770.78
MW-88-1	Bedrock-Saginaw Fm	858.75	755.56	719.06	737.31	71.18	787.57	784.75
MW-91-3	Bedrock-Saginaw Fm	860.81	754.35	742.35	748.35	71.11	789.70	782.46
MW-91-4	Bedrock- Grand River Fm	855.59	739.93	723.43	731.68	63.20	792.39	-
MW-91-5	Bedrock- Grand River Fm	860.61	748.70	733.20	740.95	66.55	794.06	-
MW-91-6	Bedrock- Grand River Fm	851.84	770.22	754.22	762.22	74.50	777.34	-

Notes:

TOC - Top of Casing

feet bgs - below below ground surface

feet toc - feet below top of casing

feet msl - feet above mean sea level

* - Correction for effective head discussed in Section 2.1.3 of RFI Supplemental Report. Bedrock wells installed within the Saginaw Formation corrected for average downward gradient of 0.4 (ft/ft)

** - Baseline well refers to deepest bedrock well in dataset - effective head calculated relative to this well depth.

Table 5
Summary of Vertical Gradient Calculations for Deep Aquifer, December 2013
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Well ID / Nested Pair	TOC Elevation	Screen Interval (ft msl)			Approximate Depth to Groundwater	Approximate Groundwater Elevation	Hydrostratigraphic Unit	Vertical Gradient	Direction
		Top	Bottom	Midpoint					
	feet msl	feet bgs	feet bgs	feet bgs	feet toc	feet msl		ft/ft	
Plant 3 Source Area									
MW-12-21	864.50	791.45	786.45	788.95	67.54	796.96	Deep Overburden	0.26	downward
MW-13-22	864.37	772.50	767.50	770.00	72.29	792.08	Weathered Bedrock		
MW-13-22	864.37	772.50	767.50	770.00	72.29	792.08	Weathered Bedrock	0.04	downward
MW-13-28	864.42	762.61	746.11	754.36	73.01	791.41	Bedrock - Grand River Formation		
Southern Plant 3									
MW-13-48	854.83	787.17	782.17	784.67	60.55	794.28	Deep Overburden	1.04	downward
MW-13-34	853.92	777.82	772.82	775.32	69.40	784.52	Weathered Bedrock		
MW-13-34	853.92	777.82	772.82	775.32	69.40	784.52	Weathered Bedrock	-0.01	upward
MW-13-47	853.74	752.89	732.89	742.89	68.85	784.89	Bedrock - Grand River Formation		
North Central Plant 2									
MW-13-43	863.82	788.97	783.97	786.47	69.95	793.87	Weathered Bedrock	0.38	downward
MW-13-44	864.24	765.03	746.03	755.53	81.98	782.26	Bedrock - Saginaw Formation		
Southern Plant 2 / Plant 6									
MW-13-52	872.50	799.84	789.84	794.84	74.50	798.00	Weathered Bedrock	0.47	downward
MW-13-50	872.85	784.93	762.93	773.93	84.60	788.25	Bedrock - Saginaw Formation		

Notes:
TOC - Top of Casing
feet bgs - below below ground surface
feet toc - feet below top of casing
feet msl - feet above mean sea level

Table 6
Summary of Slug Test Hydraulic Conductivity Results
RACER Trust Plants 2, 3 and 6 - Lansing, MIchigan

Well ID	Screen Interval (ft bgs)		Depth to Groundwater	Hydraulic Conductivity (K)						
	Top	Bottom		Slug In Bouwer-Rice	Slug In KGS	Slug Out Cooper	Slug Out Bouwer-Rice	Slug Out KGS	Average*	Average*
	feet bgs	feet bgs	feet toc	ft/day	ft/day	ft/day	ft/day	ft/day	ft/day	cm/sec
DEEP OVERBURDEN										
MW-12-21	70.00	75.00	67.62	**0.03**	NA	NA	NA	NA	0.03	1.0E-05
MW-13-48	65.00	70.00	60.05	**66**	73	252	**53**	162	60	2.1E-02
WEATHERED BEDROCK										
MW 13-22	89.00	94.00	72.25	27	**47**	59	17	**49**	48	1.7E-02
MW-13-34	74.00	79.00	69.31	**0.9**	3.8	0.7	**0.7**	0.7	0.8	2.7E-04
MW-13-46	68.00	73.00	66.04	**0.5**	NA	0.0	**0.1**	0.03	0.3	1.0E-04
MW-13-49	73.00	78.00	69.28	**0.2**	NA	15.7	NA	NA	0.2	6.7E-05
MW-13-42 (Slug Out Test #2)	70.00	75.00	73.51	NA	NA	NA	**28**	27	28	9.7E-03
MW-13-43	72.00	77.00	69.74	NA	NA	NA	0.8	**1.5**	1.5	5.1E-04
MW-13-45	72.00	77.00	69.92	3.5	**3.8**	1.3	2.2	**1.1**	2.5	8.8E-04
MW-13-51	77.00	87.00	73.35	1.0	**0.4**	NA	0.9	**0.4**	0.4	1.5E-04
MW-13-52	70.00	80.00	71.00	**4.7**	7.3	9.7	**3.2**	6.9	4.0	1.4E-03
MW-13-53	73.00	83.00	77.38	**3.9**	4.7	NA	**4.8**	12.2	4.3	1.5E-03
BEDROCK										
MW-13-47	99.00	119.00	68.90	**2.7**	4.2	7.6	**1.6**	2.8	2.2	7.6E-04

Notes:

KGS Model (Hyder et al, 1996) - fully transient model for an overdamped slug test in a confined aquifer for fully and partially penetrating wells. Has solutions for both confined and unconfined aquifers.

Bouwer and Rice Model (1976) - semi-analytical method for the analysis of an overdamped slug test in a fully or partially penetrating well. Has solutions for both confined and unconfined aquifers.

BOLD - Best fit

* - Average of slug-in and slug-out data for solution method that best fits the data- either the Bouwer and Rice or KGS solutions (not both)

NA - Not applicable/Not analyzed. Data for slug-in or slug-out not recorded or not analyzed using specified model.

feet bgs - feet below ground surface

feet toc - feet below top of casing

ft/day - feet per day

cm/sec - centimeters per second

Table 7
Summary of Specific Capacity Testing Results in Deep Wells
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Well	Depth Interval	Aquifer Thickness	Flow Rate (Q)	Steady State Drawdown (s)	Specific Capacity	Transmissivity (Driscoll, 1986)	Hydraulic Conductivity (K)	Hydraulic Conductivity (K)	Comments
	(ft bgs)	(ft)	(gpm)	(ft)	(gpm/ft)	(ft2/day)	ft/day	(cm/sec)	
DEEP OVERBURDEN									
MW-13-27	67-72	8.00	1.00	3.53	0.28	56.81	7.1	2.51E-03	unconfined
MW-13-29	68-73	7.50	0.83	1.22	0.68	136.44	18.2	6.42E-03	unconfined
MW-13-48	65-70	12.00	0.80	0.36	2.22	445.67	37.1	1.31E-02	unconfined
WEATHERED BEDROCK									
MW-13-22	89-94	6.00	0.75	0.70	1.07	286.50	47.7	1.69E-02	confined
MW-13-45	72-77	9.00	0.30	9.00	0.03	8.91	1.0	3.50E-04	confined
BEDROCK (LOWER 1,4-D PLUME)									
MW-13-28	99-115.5	16.50	1.00	4.89	0.20	54.68	3.3	1.17E-03	Grand River Formation
MW-13-50	85-105	22.00	1.00	12.01	0.08	22.26	1.0	3.57E-04	Saginaw Formation
MW-12-05	75-99	24.00	0.53	10.41	0.05	13.57	0.6	2.00E-04	Saginaw Formation
MW-13-47	99-119	20.00	1.05	8.20	0.13	34.24	1.7	6.04E-04	Saginaw Formation
OTHER BEDROCK									
MW-12-01	87-110	23.00	0.75	8.31	0.09	24.14	1.0	3.70E-04	Saginaw Formation
MW-12-02	87-110	23.00	3.25	0.48	6.77	1810.78	78.7	2.78E-02	Grand River Formation
MW-12-03	57-80	23.00	0.75	9.45	0.08	21.22	0.9	3.26E-04	Saginaw/ Grand River Formation
MW-12-04	77-100	23.00	2.75	1.15	2.39	639.51	27.8	9.82E-03	Grand River Formation
MW-12-06	80.6-99.5	19.00	0.53	10.49	0.05	13.47	0.7	2.50E-04	Saginaw Formation
MW-13-37	97-112	15.00	0.97	7.31	0.13	35.48	2.4	8.35E-04	Saginaw Formation
MW-13-38	107-124	17.00	0.90	11.05	0.08	21.78	1.3	4.52E-04	Saginaw Formation
MW-13-39B	97-112	15.00	1.02	16.20	0.06	16.84	1.1	3.96E-04	Saginaw Formation

Note:

Fletcher G. Driscoll 1986. Groundwater and Wells, Us Filter/Johnson Screens

Empircial Relationship for unconfined aquifer - T= (Q/s)*1500, confined - T=(Q/s)*2000

feet bgs - feet below ground surface

feet toc - feet below top of casing

ft/day - feet per day

Table 8
Comparison of Specific Capacity and Slug Testing Hydraulic Testing Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Well	Depth Interval	Aquifer Thickness	Specific Capacity Testing		Slug Testing	
			Hydraulic Conductivity (K)	Hydraulic Conductivity (K)	Hydraulic Conductivity (K)	Hydraulic Conductivity (K)
	(ft bgs)	(ft)	ft/day	(cm/sec)	ft/day	(cm/sec)
DEEP OVERBURDEN						
MW-13-48	65-70	12.00	37	1.3E-02	60	2.1E-02
WEATHERED BEDROCK						
MW-13-22	89-94	6.00	48	1.7E-02	48	1.7E-02
MW-13-45	72-77	9.00	1.0	3.5E-04	2.5	8.8E-04
BEDROCK (LOWER 1,4-D PLUME)						
MW-13-47	99-119	20.00	1.7	6.0E-04	2.2	7.6E-04

Note:
feet bgs - feet below ground surface
ft/day - feet per day
cm/sec - centimeters per second

Table 9
Summary of Soil Sampling Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(ft): Date Collected:	Units	SB-MI SO (DEQ2011) Res DWP [(a)]	SB-MI SO (DEQ2011) GSIP [(b)]	SB-MI SO (DEQ2011) Non-Res PSIC	SB-MI SO (DEQ2011) Non-Res	MI SO (DEQ2011) Background	SB-A16-HU181 0 - 1 07/10/13	SB-A16-HU181 4 - 5 07/10/13	SB-A16-HU181 10 - 11 07/10/13	SB-A16-HU181 15 - 16 07/10/13	SB-A16-HU181 20 - 21 07/10/13	SB-A16-HU181 24 - 25 07/10/13	SB-A16-IL168 1 - 2 07/10/13	SB-A16-IL168 6 - 7 07/10/13	SB-A16-IL168 11 - 12 07/10/13	SB-A16-IL168 17 - 18 07/10/13
Inorganics																
Antimony	mg/kg	4.3	94	2,537	670	- -	**0.30 J**	**0.54**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Arsenic	mg/kg	4.6	4.6	391.3	37	5.8	**9.08 [abe]**	**16.7 [abe]**	**1.77**	**1.31**	**0.84**	**1.74**	**3.33**	**1.25**	**0.9**	**1.79**
Barium	mg/kg	1,300	783	64,500	1.30E+05	75	**178 [e]**	**230 [e]**	**45**	**23**	**28.9**	**25.6**	**31.5**	**44.2**	**14.6**	**8.25**
Boron	mg/kg	10	140	- -	3.50E+05	- -	**1.82 J**	**6.84**	<2.0	<2.0	<2.0	**1.06 J**	<2.0	**1.39 J**	<2.0	<2.0
Cadmium	mg/kg	6	5.39	946	2,100	1.2	**1.39 [e]**	**1.13**	**0.19 J**	**0.09 J**	**0.10 J**	**0.09 J**	**0.07 J**	**0.35**	**0.17 J**	**0.07 J**
Chromium	mg/kg	1.00E+06	4.62E+06	64,500	1.00E+06	18	**8.48**	**11.8**	**5.13**	**2.35**	**3.34**	**2.78**	**1.75**	**3.45**	**2.86**	**1.32**
Cobalt	mg/kg	0.8	2	2,537	9,000	6.8	**4.54**	**4.18**	**3.59**	**2.74**	**2.85**	**2.79**	**1.04**	**2.38**	**3.57**	**1.41**
Copper	mg/kg	5,800	116	25,370	73,000	32	**293 [be]**	**154 [be]**	**15.5**	**9.33**	**10**	**9.39**	**11.4**	**36.7 [e]**	**10**	**4.4**
Lead	mg/kg	700	7,680	18,920	900	21	**427 [e]**	**1,250 [ade]**	**10.1**	**4.52**	**5.73**	**4.21**	**25.9 [e]**	**108 [e]**	**5.05**	**2.63**
Manganese	mg/kg	1	90.1	990 (1)	90,000	440	**450 [abe]**	**395**	**457 [abe]**	**294**	**277**	**242**	**82.3**	**171**	**288**	**159**
Mercury	mg/kg	1.7	0.05	3,784	580	0.13	**1.067 [be]**	**0.8965 [be]**	**0.029**	**0.0159**	**0.0151**	**0.0129**	**0.0131**	**0.0194**	**0.016**	**0.0114**
Nickel	mg/kg	100	120	6,880	1.50E+05	20	**12.9**	**14.5**	**12.3**	**8.7**	**8.56**	**9.08**	**3.15**	**8.68**	**10.4**	**5.67**
Selenium	mg/kg	4	0.4	25,370	9,600	0.41	**0.29 J**	**0.49 [be]**	<0.40	<0.40	<0.40	<0.40	<0.40	**0.44 [be]**	**1.31 [be]**	<0.40
Silver	mg/kg	4.5	0.1	1,247	9,000	1	**0.26**	**0.32**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vanadium	mg/kg	72	430	- -	5,500	- -	**11.7**	**31.5**	**8.8**	**4.33**	**5.83**	**4.98**	**4.83**	**5.66**	**6.45**	**2.89**
Zinc	mg/kg	2,400	261	- -	6.30E+05	47	**446 [be]**	**572 [be]**	**19.9**	**15.7**	**13.9**	**12.9**	**12.9**	**117 [e]**	**15.4**	**9.02**
Miscellaneous																
Total solids	%	- -	- -	- -	- -	- -	**86**	**59**	**78**	**88**	**87**	**89**	**88**	**90**	**84**	**90**

Table 9
Summary of Soil Sampling Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(ft): Date Collected:	Units	SB-MI SO (DEQ2011) Res DWP [a]	SB-MI SO (DEQ2011) GSIP [b]	SB-MI SO (DEQ2011) Non-Res PSIC	SB-MI SO (DEQ2011) Non-Res	MI SO (DEQ2011) Background	SB-A16-IL168 23 - 24 07/10/13	SB-P3-BL78 1 - 2 07/11/13	SB-P3-BL78 6 - 7.5 07/11/13	SB-P3-BL78 11 - 12.5 07/11/13	SB-P3-BL78 16 - 17.5 07/11/13	SB-P3-BL78 21 - 22.5 07/11/13	SB-P3-BL78 29 - 30 07/11/13	SB-P3-CE80 0 - 1 07/11/13	SB-P3-CE80 6 - 7.5 07/11/13	SB-P3-CE80 11 - 12 07/11/13	SB-P3-CE80 16 - 17 07/11/13
Inorganics																	
Antimony	mg/kg	4.3	94	2,537	670	- -	<0.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/kg	4.6	4.6	391.3	37	5.8	**1.33**	**2.7**	**3.11**	**3**	**2.71**	**2.14**	**2.31 [2.55]**	**2.13**	**2.08**	**1.1**	**1.14**
Barium	mg/kg	1,300	783	64,500	1.30E+05	75	**14.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/kg	10	140	- -	3.50E+05	- -	**1.06 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/kg	6	5.39	946	2,100	1.2	**0.06 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/kg	1.00E+06	4.62E+06	64,500	1.00E+06	18	**2.12**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/kg	0.8	2	2,537	9,000	6.8	**2.22**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/kg	5,800	116	25,370	73,000	32	**8.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/kg	700	7,680	18,920	900	21	**3.74**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/kg	1	90.1	990 (1)	90,000	440	**262**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/kg	1.7	0.05	3,784	580	0.13	**0.0147**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/kg	100	120	6,880	1.50E+05	20	**7.82**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/kg	4	0.4	25,370	9,600	0.41	**0.24 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/kg	4.5	0.1	1,247	9,000	1	<0.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/kg	72	430	- -	5,500	- -	**4.12**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/kg	2,400	261	- -	6.30E+05	47	**10.4**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous																	
Total solids	%	- -	- -	- -	- -	- -	**85**	**89**	**86**	**89**	**89**	**95**	**93**	**86**	**90**	**84**	**91**

Table 9
Summary of Soil Sampling Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(ft): Date Collected:	Units	SB-MI SO (DEQ2011) Res DWP [a]	SB-MI SO (DEQ2011) GSIP [b]	SB-MI SO (DEQ2011) Non-Res PSIC	SB-MI SO (DEQ2011) Non-Res	MI SO (DEQ2011) Background	SB-P3-CE80 21 - 22 07/11/13	SB-P3-CE80 26 - 27 07/11/13	SB-P3-CN180 1 - 2 07/10/13	SB-P3-CN180 6 - 7 07/10/13	SB-P3-CN180 11 - 12 07/10/13	SB-P3-CN180 16 - 17.5 07/10/13	SB-P3-CN180 21 - 22.5 07/10/13	SB-P3-CN180 28 - 29 07/10/13	SB-P3-DM76 1 - 2 07/11/13	SB-P3-DM76 6 - 7.5 07/11/13
Inorganics																
Antimony	mg/kg	4.3	94	2,537	670	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/kg	4.6	4.6	391.3	37	5.8	**3.03**	**3.64**	**1.88**	**3.26**	**1.98**	**0.75 [0.82]**	**2.36**	**0.89**	**1.58**	**3.41**
Barium	mg/kg	1,300	783	64,500	1.30E+05	75	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/kg	10	140	- -	3.50E+05	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/kg	6	5.39	946	2,100	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/kg	1.00E+06	4.62E+06	64,500	1.00E+06	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/kg	0.8	2	2,537	9,000	6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/kg	5,800	116	25,370	73,000	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/kg	700	7,680	18,920	900	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/kg	1	90.1	990 (1)	90,000	440	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/kg	1.7	0.05	3,784	580	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/kg	100	120	6,880	1.50E+05	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/kg	4	0.4	25,370	9,600	0.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/kg	4.5	0.1	1,247	9,000	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/kg	72	430	- -	5,500	- -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/kg	2,400	261	- -	6.30E+05	47	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Miscellaneous																
Total solids	%	- -	- -	- -	- -	- -	**88**	**87**	**89**	**88**	**90**	**96**	**92**	**97**	**88**	**91**

Table 9
Summary of Soil Sampling Analytical Results
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Location ID: Sample Depth(ft): Date Collected:	Units	SB-MI SO (DEQ2011) Res DWP [a]	SB-MI SO (DEQ2011) GSIP [b]	SB-MI SO (DEQ2011) Non-Res PSIC	SB-MI SO (DEQ2011) Non-Res	MI SO (DEQ2011) Background	SB-P3-DM76 12 - 13 07/11/13	SB-P3-DM76 18 - 19 07/11/13	SB-P3-DM76 23 - 24 07/11/13	SB-P3-DM76 29 - 30 07/11/13
Inorganics										
Antimony	mg/kg	4.3	94	2,537	670	- -	NA	NA	NA	NA
Arsenic	mg/kg	4.6	4.6	391.3	37	5.8	**1.91 [1.87]**	**2.17**	**1.05**	**1.72**
Barium	mg/kg	1,300	783	64,500	1.30E+05	75	NA	NA	NA	NA
Boron	mg/kg	10	140	- -	3.50E+05	- -	NA	NA	NA	NA
Cadmium	mg/kg	6	5.39	946	2,100	1.2	NA	NA	NA	NA
Chromium	mg/kg	1.00E+06	4.62E+06	64,500	1.00E+06	18	NA	NA	NA	NA
Cobalt	mg/kg	0.8	2	2,537	9,000	6.8	NA	NA	NA	NA
Copper	mg/kg	5,800	116	25,370	73,000	32	NA	NA	NA	NA
Lead	mg/kg	700	7,680	18,920	900	21	NA	NA	NA	NA
Manganese	mg/kg	1	90.1	990 (1)	90,000	440	NA	NA	NA	NA
Mercury	mg/kg	1.7	0.05	3,784	580	0.13	NA	NA	NA	NA
Nickel	mg/kg	100	120	6,880	1.50E+05	20	NA	NA	NA	NA
Selenium	mg/kg	4	0.4	25,370	9,600	0.41	NA	NA	NA	NA
Silver	mg/kg	4.5	0.1	1,247	9,000	1	NA	NA	NA	NA
Vanadium	mg/kg	72	430	- -	5,500	- -	NA	NA	NA	NA
Zinc	mg/kg	2,400	261	- -	6.30E+05	47	NA	NA	NA	NA
Miscellaneous										
Total solids	%	- -	- -	- -	- -	- -	**91**	**87**	**94**	**90**

Table 10
Summary of Storm Sewer Groundwater Sampling Results
RACER Plants 2, 3 and 6 - Lansing, Michigan

Location ID:	Units	Groundwater Surface Water Interface Criteria (DEQ 2012)	Plant 2									Plant 3								Plant 6									
			P2-MH-NW				P2-MH-W	P2 Outfall @ P3				P3-MH-NE				P3-MH-S				P6-MH-SW		P6-MH2-SW*			P6-MH-NE			P6-MH2-NE	ESC-1
Date Collected:			11/6/2012[1]	01/18/13	05/17/13	09/03/13	09/03/13	11/7/2012[1]	01/18/13	05/17/13	09/03/13	11/7/2012[1]	01/18/13	05/17/13	09/03/13	11/7/2012[1]	01/18/13	05/17/13	09/03/13	11/6/2012[1]	05/17/13	01/18/13	05/17/13	09/03/13	11/7/2012[1]	01/18/13	05/17/13	09/03/13	05/17/13
Volatile Organics [7]																													
Acetone	ug/L	1,700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	22	<10	<10	<10	<10	<10	11	<10
1,4-Dioxane (X)	ug/L	2,800	25	18	26	21	<5	17	10	15	10	<5	<5	<5	<5	<5	12	15	14	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	ug/L	740	1	1	2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	ug/L	89	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene (X)	ug/L	200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	620	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	1	<1	<1	<1	<1
Ethylbenzene	ug/L	18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5	5	10	3	2	<1	<1	<1	<1	<1
Methyl cyclohexane	ug/L	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1
Toluene	ug/L	270	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1
Xylene (total)	ug/L	41	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	30	37	**64**	22	14	<2	3	<2	<2	<2
Semivolatile Organics [7]																													
Benzo(a)anthracene	ug/L	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a)pyrene	ug/L	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(b)fluoranthene	ug/L	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	ug/L	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(k)fluoranthene	ug/L	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	<1	<1	<1	<1	<1	<1	<1
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	25	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	1	<1	<1	2	<1	1	<1	<1	1	2	<1	<1	<1
Carbazole	ug/L	10 (M); 4.0	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<1	<1	<1
Chrysene	ug/L	- -	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dimethylphenol	ug/L	380	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<1	5	<1
Dimethyl phthalate	ug/L	- -	<1	<1	<1	6	4	3	<1	<1	5	<1	<1	<1	5	3	<1	<1	5	<1	<1	<1	<1	6	8	<1	<1	6	<1
Di-n-butylphthalate (DBP)	ug/L	9.7	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	1	<1	1	<1	<1	2	2	1	<1	<1
Fluoranthene	ug/L	1.6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**8**	<1	<1	<1	<1	<1	<1	<1	<1	<1
Indeno(1,2,3-cd)pyrene	ug/L	ID	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Napthalene	ug/L	11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	2	<1	<1
Phenanthrene	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**4**	<1	<1	<1	<1	<1	<1	<1	<1	<1
Pyrene	ug/L	ID	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	7	<1	<1	<1	<1	<1	<1	<1	<1	<1
Inorganics [7]																													
Antimony (X)	mg/L	0.13	<0.002	<0.002	<0.005	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	0.007	<0.005	0.002	<0.005	<0.005	0.004	0.004	<0.005	<0.005	<0.005
Arsenic	mg/L	0.01	0.007	0.003	0.004	0.007	<0.002	0.003	<0.002	0.002	0.004	0.005	<0.002	<0.002	0.003	0.002	0.002	0.003	0.005	**0.014**	0.003	0.003	0.004	0.005	0.009	0.006	**0.011**	**0.011**	<0.002
Barium (G)	mg/L	1.2	0.06	0.075	0.072	0.068	0.047	0.10	0.103	0.107	0.115	0.14	0.059	0.078	0.081	0.16	0.1	0.111	0.108	0.14	0.041	0.049	0.044	0.058	0.18	0.177	0.195	0.069	0.016
Boron (X)	mg/L	7.2	0.33	0.23	0.2	0.27	0.11	0.25	0.16	0.15	0.19	0.33	0.2	0.23	0.28	0.12	0.19	0.15	0.22	0.31	0.2	0.26	0.19	0.29	0.16	0.13	0.14	0.21	<0.05
Cadmium (G, X)	mg/L	0.0045	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	0.0013	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Chromium (See Note 2.)	mg/L	0.011	<0.002	<0.010	<0.005	<0.005	<0.005	<0.002	<0.010	<0.005	<0.005	**0.012**	<0.010	<0.005	<0.005	<0.002	<0.010	<0.005	<0.005	**0.027**	<0.005	<0.010	<0.005	<0.005	<0.002	<0.010	<0.005	<0.005	<0.005
Cobalt	mg/L	0.1	<0.002	<0.010	<0.005	<0.005	<0.005	<0.002	<0.010	<0.005	<0.005	0.006	<0.010	<0.005	<0.005	<0.002	<0.010	<0.005	<0.005	0.004	<0.005	<0.010	<0.005	<0.005	<0.002	<0.010	<0.005	<0.005	<0.005
Copper (G)	mg/L	0.02	0.003	0.003	<0.004	<0.005	0.008	0.003	0.002	<0.004	<0.005	**0.052**	0.003	<0.004	0.005	0.002	0.002	<0.004	0.014	**0.118**	<0.004	0.006	0.01	0.015	<0.002	<0.002	<0.004	0.014	0.015
Lead (G, X)	mg/L	0.044	0.003	0.005	0.005	<0.003	<0.003	0.004	<0.002	0.008	<0.003	0.039	<0.002	0.004	<0.003	0.003	<0.002	0.009	<0.003	**0.417**	<0.003	0.011	0.005	<0.003	0.003	<0.002	0.008	<0.003	0.004
Manganese (G, X)	mg/L	4.5	0.032	0.132	0.065	0.044	0.033	0.043	0.055	0.087	0.048	0.884	0.028	0.09	0.051	0.136	0.144	0.146	0.095	1.81	0.021	0.075	0.044	0.02	0.386	0.341	0.491	0.099	0.008
Mercury	mg/L	0.0000013	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nickel (G)	mg/L	0.12	0.003	<0.010	<0.005	0.008	0.013	0.002	<0.010	<0.005	0.010	0.043	<0.010	0.018	0.017	0.004	<0.010	<0.005	0.009	0.013	<0.005	<0.010	<0.005	0.008	0.003	<0.010	<0.005	0.008	<0.005
Selenium	mg/L	0.005	0.001	<0.002	<0.005	<0.005	<0.005	<0.001	<0.002	<0.005	<0.005	<0.001	<0.002	<0.005	<0.005	<0.002	<0.002	<0.005	<0.005	**0.006**	<0.005	**0.006**	<0.005	<0.005	<0.002	<0.002	<0.005	**0.006**	<0.005
Vanadium	mg/L	0.027	<0.002	<0.002	<0.004	<0.005	<0.005	<0.002	<0.002	<0.004	<0.005	0.011	<0.002	<0.004	<0.005	<0.002	<0.002	<0.004	<0.005	0.014	<0.004	0.004	<0.004	<0.005	0.004	0.003	0.007	0.008	<0.004
Zinc (G)	mg/L	0.26	0.02	0.028	0.20	0.01	<0.005	<0.010	<0.010	0.009	0.006	**0.28**	<0.010	0.018	0.014	0.02	0.01	0.016	0.01	**0.42**	<0.005	0.03	0.011	<0.005	0.03	0.025	0.007	0.008	0.01

Notes:
1. GSI Criteria obtained from the MDEQ Part 201 generic cleanup Table 1, dated September 28, 2012.
2. The total chromium data is compared to the cleanup criteria for Chromium VI.
3. **Bold** and shading denotes a result above of the Groundwater Surface Water Interface Criteria.
4. - - indicates criteria is not developed.
5. *- Same storm sewer as P6-MH-SW but collected from next structure downgradient, immediately before the stormceptor
6. [1] - Turbid sample; submitted for total metals
7. Gray shading - The January 18, 2013 samples for P3-MH-S and P3-MH-NE were inadvertantly labeled with the same name,
It is therefore unclear which result goes with which sample. Results will be confirmed during follow-up sampling events.
8. Only those constituents of concern (COCs) with detections are listed. If a COC is not listed then the lab results showed non-detect.

MDEQ Criteria Footnotes: (as revised September 28, 2012)
(G) Groundwater surface water interface (GSI) criterion depends on the water hardness of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life was calculated based on the average of readily available published hardness values calculated to be 257 mg/L. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV), and the surface water human nondrinking water value (HNDV).
(X) The GSI criterion is not protective for surface water that is used as a drinking water source.
ID = Insufficient data to develop a criterion.
- - = Not listed in the MDEQ Criteria Tables.

Acronyms and Abbreviations:
GSI = Groundwater Surface Water Interface
NA = Not analyzed
ND = Not detected.

ARCADIS

Figures

AREA 13

AREA 12

AREA 18

AREA 17

AREA 20

AREA 14

AREA 16

AREA 21

AREA 15

AREA 19

AREA 11

AREA 8

AREA 3

AREA 5-7

AREA 5-1

AREA 5-4

AREA 5-6

AREA 4

AREA 5

AREA 5-2

AREA 5-5

AREA 5-8

AREA 5-3

AREA 2

AREA 10

AREA 1

AREA 9

AREA 6

AREA 7

LEGEND

- RFI PHASE 2 WORK PLAN AREAS
- DEEP VAP/HPT BORING
- LIF BORING
- OTHER SOIL BORING
- PERCHED ZONE MONITORING WELL
- DEEP OVERBURDEN / WEATHERED BEDROCK MONITORING WELL
- BEDROCK MONITORING WELL
- PLANT 2
- PLANT 3
- PLANT 6
- APPROXIMATE EXTENT LNAPL

APPROXIMATE EXTENT > PART 201 CRITERIA

- VOCs/SVOCs IN SOIL
- LOWER 1,4-DIOXANE IMPACTS
- UPPER PERCHED 1,4-DIOXANE/VOC IMPACTS
- METALS IN SOIL
- METALS IN GROUNDWATER

0 410 820

SCALE IN FEET

NOTE:

EXTENT OF IMPACTS BASED ON RFI PHASE 1 & 2 SOIL AND GROUNDWATER DATA, AS WELL AS SOIL METALS DATA COLLECTED HISTORICALLY AT THE SITE.

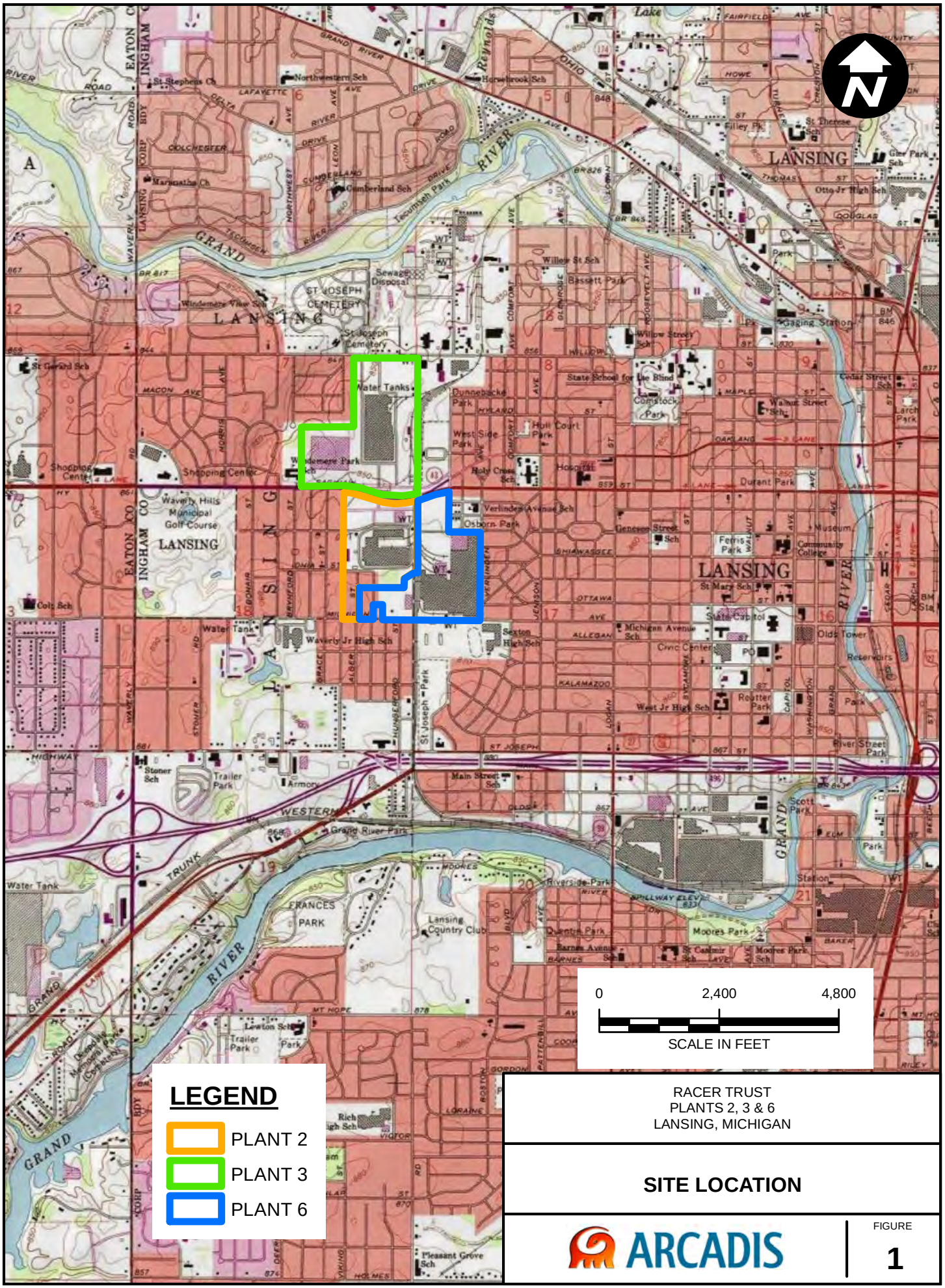
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

SUMMARY OF SITE IMPACTS

ARCADIS

FIGURE
ES-1

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\ES-1 Site Layout Plumes.mxd PLOTTED: 2/13/2014 10:12:57 AM BY: PCurry



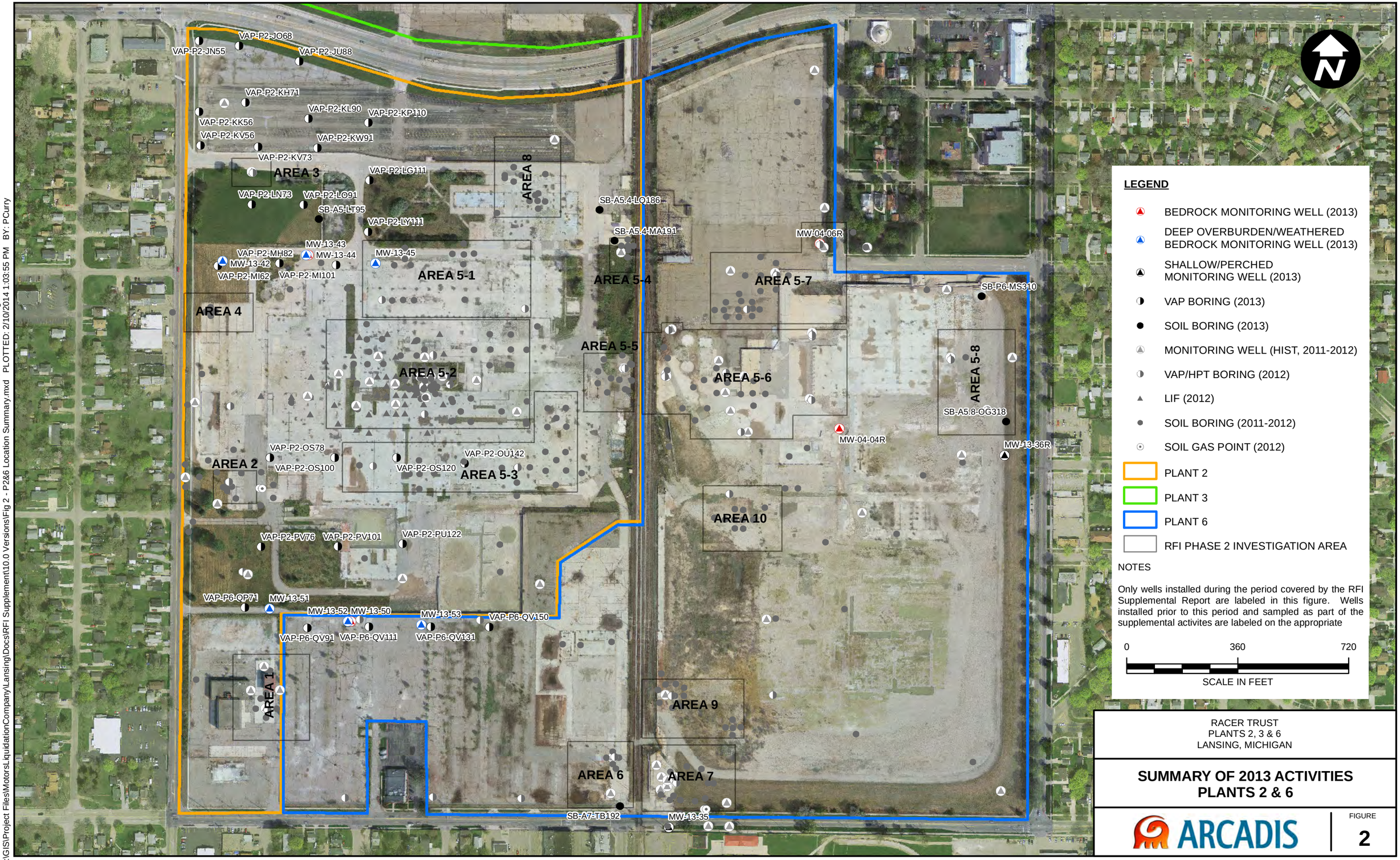
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

SITE LOCATION

ARCADIS

FIGURE
1

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\Phase 2 RFI Report Figs\FIG 1 - SITE LOCATION.mxd PLOTTED: 3/11/2013 12:44:25 PM BY: PCurry



CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 2 - P2&6 Location Summary.mxd PLOTTED: 2/10/2014 1:03:55 PM BY: PCurry

AREA 13
AREA 12
AREA 11
AREA 20
AREA 21
AREA 14
AREA 18
AREA 17
AREA 15
AREA 16
AREA 19
MW-13-39B
SB-A12-BH94
SB-P3-BL78
SB-A18-BJ158
MW-13-40
SB-A18-BY181
SB-P3-CE80
MW-13-38
MW-13-41
SB-P3-CN180
MW-13-37
SB-P3-DM76
MW-13-26
MW-13-30
MW-13-24
MW-13-22
MW-13-28
MW-13-23
MW-13-27
MW-13-25
MW-13-29
VAP-P3-IC89
MW-13-31
SB-A16-HU181
MW-13-32
MW-13-33
SB-A16-IL68
VAP-P3-IR43
MW-13-47
MW-13-48
MW-13-49
MW-13-46
MW-13-34
VAP-P3-IS88

LEGEND

- DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL (2013)
- BEDROCK MONITORING WELL (2013)
- SHALLOW/PERCHED MONITORING WELL (2013)
- VAP BORING (2013)
- SOIL BORING (2013)
- MONITORING WELL (HIST, 2011-2012)
- VAP/HPT BORING (2012)
- LIF (2012)
- SOIL BORING (2011-2012)
- SOIL GAS POINT (2012)
- PLANT 2
- PLANT 3
- PLANT 6
- RFI PHASE 2 INVESTIGATION AREA

NOTES

Only wells installed during the period covered by the RFI Supplemental Report are labeled in this figure. Wells installed prior to this period and sampled as part of the supplemental activites are labeled on the appropriate

0 360 720

SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

SUMMARY OF 2013 ACTIVITIES PLANT 3

ARCADIS

FIGURE 3

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 3 - P3 Location Summary.mxd PLOTTED: 2/10/2014 1:01:32 PM BY: PCurry

A
Northwest

Area 11

A’
Southeast

W. Saginaw Ave

Coliseum

SB-A11-HC24 (5-9’): <5

Area of Soil and GW CVOC impacts

SB-A11-HE23 (19-23’): 82

Perched Zone

GW Recharge

DRY

DRY

MW-12-21: 500

MW-13-29: 31

MW-13-48: 34

VAP: MW-13-29 (76-80’):130

TILL

MW-13-34: 99

Weathered Bedrock

MW-13-22: 270

MW-13-28: <5

Bedrock: Grand River Formation

MW-13-47: <5

STRATIGRAPHIC UNIT

- CONCRETE/ASPHALT/TOPSOIL
- FILL
- GRAVELLY SAND
- SAND
- SANDY SILT/SILT
- SILTY/SANDY/GRAVELLY CLAY
- CLAY
- PEAT
- BEDROCK-SANDSTONE
- BEDROCK-SHALE
- NO RECOVERY

35 1,4-Dioxane in Groundwater (µg/L) (12/2013)

Approximate Monitoring Well Screen Interval
Green - Deep Overburden
Blue- Weathered Bedrock
Red- Bedrock

Approximate Groundwater Elevation (12/2013)
(color coded for depth)

RACER TRUST
PLANTS 2, 3, & 6
LANSING, MICHIGAN

LOWER 1,4-DIOXANE SOURCE AREA CROSS SECTION A-A’

ARCADIS

FIGURE 4

MW-12-20
<5
MW-13-26
12
MW-13-30
<5
MW-13-24
<5
MW-12-21
500
MW-13-23
27
MW-13-27
<5
MW-13-25
14
MW-13-29
130
VAP-P3-IC89
<5
MW-13-46
<5
VAP-P3-IS63
136
MW-13-49
<5
VAP-P2-JN55
<5
VAP-P2-JO68
121
VAP-P2-JU88
<5
VAP-P2-KH71
16
VAP-P2-KK56
<12 UB
VAP-P2-KL90
<5
VAP-P2-KP110
<5
VAP-P2-KV56
<5
VAP-P2-KV73
<5
VAP-P2-KW91
18
VAP-P2-LG111
<5
VAP-P2-LN73
<6 UB
VAP-P2-LO91
106
VAP-P2-LY111
<5
MW-13-42
6
MW-13-43
220
VAP-P2-MH82
26
VAP-P2-MI101
55
MW-13-25
25
VAP-P2-OS78
<5
VAP-P2-OS100
196
VAP-P2-OS120
<5
VAP-P2-OU142
<5
VAP-P2-PV76
<5
VAP-P2-PV101
<5
VAP-P2-PU122
<5
VAP-P6-QP71
<5
MW-13-51
<5
MW-13-52
<5
MW-13-50
<5
MW-13-53
<5
VAP-P6-QV91
<5
VAP-P6-QV91
<5
VAP-P6-QV111
<5
VAP-P6-QV131
<5
VAP-P6-QV150
<5
VAP-P6-QV150
<5

8.5
8.5
250
8.5
8.5
85

LEGEND

- 1,4-DIOXANE ISO-CONCENTRATION CONTOUR
- INFERRED
- BEDROCK MONITORING WELL
- DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL
- DEEP VAP BORING (2013)
- PLANT 2
- PLANT 3
- PLANT 6

NOTE:

Map includes only the maximum concentration of 1,4-dioxane detected at each VAP boring or monitoring location. Only the values shown were used to calculate the iso-contours.

All 1,4-dioxane values given in micrograms per liter (ug/L)

UB is a validation qualifier indicating that the compound is considered non-detect at the listed value due to associated blank contamination.

0 210 420
SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

LOWER 1,4-DIOXANE MAX ISO-CONCENTRATION MAP

ARCADIS

FIGURE
5

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 5 - 1,4-d plume iso-concentration.mxd PLOTTED: 2/10/2014 8:57:46 AM BY: PCurry

MW-12-20
75-80' (11/8/13)
Xylenes 1.0 ug/L

MW-13-26
Well: 72-77' (11/8/13)
All VOCs ND
VAP: 103-108'
All VOCs ND

MW-13-30
Well: 72-77' (11/12/13)
Xylenes 1.0 ug/L
VAP: 79-83'
All VOCs ND

MW-13-23
Well: 69-74' (11/12/13)
All VOCs ND
VAP: 77-81.5'
1,4-dioxane 27 ug/L
Acetone 124 ug/L
MEK 17 ug/L

MW-12-21
70-75' (11/11/13)
1,4-dioxane 500 ug/L

MW-13-22
89-94' (11/11/13)
1,4-dioxane 270 ug/L

MW-91-5 (BR)
112-128' (11/8/13)
All VOCs ND

MW-13-24
Well: 69-74' (11/11/13)
All VOCs ND
VAP: 96-101'
All VOCs ND

MW-13-28 (BR)
99-115.5' (11/11/13)
1,4-dioxane <5.0 ug/L
Acetone 22 ug/L

MW-13-27
Well: 67-72' (11/11/13)
All VOCs ND
VAP: 77-80'
1,4-dioxane <5.0 ug/L
Acetone 10 ug/L

MW-13-29
Well: 69-74' (11/11/13)
1,4-dioxane 31 ug/L
VAP: 76-80'
1,4-dioxane 130 ug/L

VAP-P3-IC89
69-72'
All VOCs ND

MW-13-25
Well: 67-72' (11/11/13)
1,4-dioxane 13 ug/L
VAP: 85-90'
1,4-dioxane <5.0 ug/L
Toluene 1.0 ug/L

MW-13-49
72-78' (12/20/13)
1,4-dioxane <5.0 ug/L
Benzene 14 ug/L
Acetone 13 ug/L
Toluene 9 ug/L
Ethylb 1 ug/L
Xylenes 4 ug/L

MW-13-48
65-70' (12/19/13)
1,4-dioxane 34 ug/L

MW-13-46
68-73' (12/19/13)
All VOCs ND

MW-13-47 (BR)
99-119' (12/19/13)
All VOCs ND

MW-91-6 (BR)
82-98.5' (12/19/13)
All VOCs ND

VAP-P3-IR43
69-73'
All VOCs ND

MW-13-34
74-79' (12/19/13)
1,4-dioxane 99 ug/L

VAP-P3-IS63
66-71'
1.4-dioxane 136 ug/L
71-76'
1,4-dioxane 35 ug/L

VAP-P3-IS88
71-76'
All VOCs ND

MW-91-5
MW-13-24
MW-13-22
MW-12-21
MW-13-28
MW-13-23
MW-13-27
MW-13-29
MW-13-25
VAP-P3-IC89
MW-12-20
MW-13-26
MW-13-30
MW-13-49
MW-13-48
MW-13-46
MW-91-6
MW-13-47
VAP-P3-IR43
MW-13-34
VAP-P3-IS63
MW-13-49
VAP-P3-IS88
VAP-P2-JN55
VAP-P2-JO68
VAP-P2-JU88

NOTES:

Green text indicates a Part 201 Drinking Water Criteria exceedance.

Abbreviations:

BR:	Bedrock Well
VAP:	Vertical Aquifer Profiling Boring
VOCs:	Volatile Organic Compounds
Ethylb:	Ethylbenzene
MEK:	Methyl Ethyl Ketone
ug/L:	micrograms per liter
ND:	Not Detected
Prop DW:	Proposed/Potential Drinking Water Criteria

Part 201 Drinking Water Criteria:

1,4-dioxane:	Prop DW: 8.5 ug/L, Current DW: 85 ug/L
Benzene:	5.0 ug/L
Ethylb:	74 ug/L
Toluene:	790 ug/L
Xylenes:	280 ug/L
Acetone:	Res: 730 ug/L, Non-Res: 2,100 ug/L
MEK:	2,200 ug/L

LEGEND

- DEEP OVERBURDEN MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL
- BEDROCK MONITORING WELL
- VAP BORING
- LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
- PLANT 2
- PLANT 3
- PLANT 6

0 180 360
SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

LOWER 1,4-DIOXANE PLUME PLANT 3

ARCADIS

FIGURE 6

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 6 - Plant 3 1,4-d plume.mxd PLOTTED: 2/10/2014 2:05:12 PM BY: PCurry

VAP-P2-JN55
67-72'
All VOCs ND

VAP-P2-JN55

VAP-P2-JO68

VAP-P2-KH71
65-70'
1,4-dioxane 10 ug/L
Benzene 12 ug/L
Acetone 18 ug/L
Toluene 8 ug/L
Xylene 1.0 ug/L
71-76'
1,4-dioxane 16 ug/L

VAP-P2-JO68
58-63' Dry
71-76'
1,4-dioxane 121 ug/L

VAP-P2-JU88

VAP-P2-JU88
77-82'
1,4-dioxane <5.0 ug/L
Benzene 8 ug/L
Acetone 46 ug/L
Toluene 2.0 ug/L

MW-12-02

VAP-P2-KH71

VAP-P2-KK56

VAP-P2-KK56
56-60'
1,4-dioxane <12 ug/L UB
71-76'
All VOCs ND

MW-12-02 (BR)
87-110' (11/5/13)
All VOCs ND

VAP-P2-KL90

VAP-P2-KL90
71-75'
All VOCs ND

VAP-P2-KP110

VAP-P2-KP110
65-70'
All VOCs ND
77-82'
1,4-dioxane <5.0 ug/L
Acetone 22 ug/L
Benzene 2.0 ug/L

VAP-P2-KV56

VAP-P2-KV73

VAP-P2-KW91

VAP-P2-KV56
70-72'
All VOCs ND

VAP-P2-KV73
69-72'
1,4-Dioxane <5.0 ug/L
Benzene 1.0 ug/L
Toluene 1.0 ug/L

VAP-P2-KW91
62-67'
All VOCs ND
79-82'
1,4-dioxane 18 ug/L

VAP-P2-LG111

VAP-P2-LG111
74-77'
1,4-dioxane <5.0 ug/L
Acetone 15 ug/L
80-82'
All VOCs ND

VAP-P2-LN73

VAP-P2-LO91

VAP-P2-LN73
67-72'
1,4-dioxane <6 ug/L UB

VAP-P2-LO91
72-77'
1,4-dioxane 106 ug/L
Acetone 28 ug/L
Benzene 1.0 ug/L
Toluene 1.0 ug/L

VAP-P2-LY111

VAP-P2-LY111
72-77'
1,4-dioxane <5.0 ug/L
Acetone 13 ug/L
Benzene 1.0 ug/L

MW-13-43
72-77' (12/13/13)
1,4-dioxane 220 ug/L

MW-13-42
70-75' (12/17/13)
1,4-dioxane 6 ug/L

MW-13-44

MW-13-42

MW-13-43

VAP-P2-MH82

VAP-P2-MI101

MW-13-45

VAP-P2-MI62

MW-13-45
72-77' (12/13/13)
1,4-dioxane 25 ug/L
Xylenes 1 ug/L

VAP-P2-MI62
70-75'
All VOCs ND

VAP-P2-MH82
72-77'
1,4-dioxane 26 ug/L
Acetone 13 ug/L

MW-13-44 (BR)
72-77' (12/13/13)
All VOCs ND

VAP-P2-MI101
72-77'
1,4-dioxane 55 ug/L
Benzene 130 ug/L
Acetone 770 ug/L
MEK 350 ug/L
Toluene 110 ug/L
Ethylb 20 ug/L
Xylenes 30 ug/L

MW-12-05

MW-12-06

MW-12-05 (BR)
75-99' (11/11/13)
All VOCs ND

MW-12-06 (BR)
80.5-91.5' (11/8/13)
All VOCs ND

VAP-P2-OS78

VAP-P2-OS100

VAP-P2-OS120

VAP-P2-OU142

VAP-P2-OS78
60-65'
All VOCs ND
70-75'
All VOCs ND

VAP-P2-OS100
70-75'
1,4-dioxane 196 ug/L
Benzene 25 ug/L
Acetone 53 ug/L
Toluene 13 ug/L
MEK 21 ug/L
Ethylb 2.0 ug/L
Xylenes 5.0 ug/L

VAP-P2-OS120
72-77'
1,4-dioxane <5.0 ug/L
Benzene 33 ug/L
Acetone 60 ug/L
Ethylb 1.0 ug/L
Xylenes 2.0 ug/L
MEK 22 ug/L

VAP-P2-OU142
80-85'
All VOCs ND

MW-12-01

MW-12-01 (BR)
87-110' (11/7/13)
All VOCs ND

VAP-P2-PV76

VAP-P2-PV101

VAP-P2-PU122

VAP-P2-PV76
80-85'
1,4-dioxane <5.0 ug/L
Toluene 2.0 ug/L
98-103'
All VOCs ND

VAP-P2-PV101
65-70'
All VOCs ND
89-94'
1,4-dioxane <5.0 ug/L
Acetone 1,730 ug/L
Toluene 190 ug/L

VAP-P2-PU122
62-70'
All VOCs ND
90-95'
1.4-dioxane <5.0 ug/L
Benzene 2.0 ug/L
Toluene 1.0 ug/L

MW-13-52
70-80' (12/20/13)
All VOCs ND

MW-13-50 (BR)
85-107' (12/16/13)
All VOCs ND

MW-13-53
73-83' (12/17/13)
All VOCs ND

VAP-P6-QP71

MW-13-51

VAP-P6-QP71
79-87'
All VOCs ND

MW-13-51
77-87' (12/16/13)
All VOCs ND

MW-13-52

MW-13-50

MW-13-53

VAP-P6-QV91

VAP-P6-QV111

VAP-P6-QV131

VAP-P6-QV150

VAP-P6-QV91
75-85'
All VOCs ND

VAP-P6-QV111
65-75'
All VOCs ND

VAP-P6-QV131
80-85'
All VOCs ND

VAP-P6-QV150
77-87'
1,4-dioxane <5.0 ug/L
Acetone 17 ug/L

NOTES:

Green text indicates a Part 201 Drinking Water Criteria exceedance.
UB: Compound considered non-detect at the listed value due to associated blank contamination

Abbreviations:
BR: Bedrock Well
VAP: Vertical Aquifer Profiling Boring
VOCs: Volatile Organic Compounds
Ethylb: Ethylbenzene
MEK: Methyl Ethyl Ketone
ug/L: micrograms per liter
ND: Not Detected
Prop DW: Proposed/Potential Drinking Water Criteria

Part 201 Drinking Water Criteria:
1,4-dioxane: Prop DW: 8.5 ug/L, Current DW: 85 ug/L
Benzene: 5.0 ug/L
Ethylb: 74 ug/L
Toluene: 790 ug/L
Xylenes: 280 ug/L
Acetone: Res: 730 ug/L, Non-Res: 2,100 ug/L
MEK: 13,000 ug/L

LEGEND

- DEEP OVERBURDEN MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL
- BEDROCK MONITORING WELL
- VAP BORING
- LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
- PLANT 2
- PLANT 3
- PLANT 6

0 225 450
SCALE IN FEET

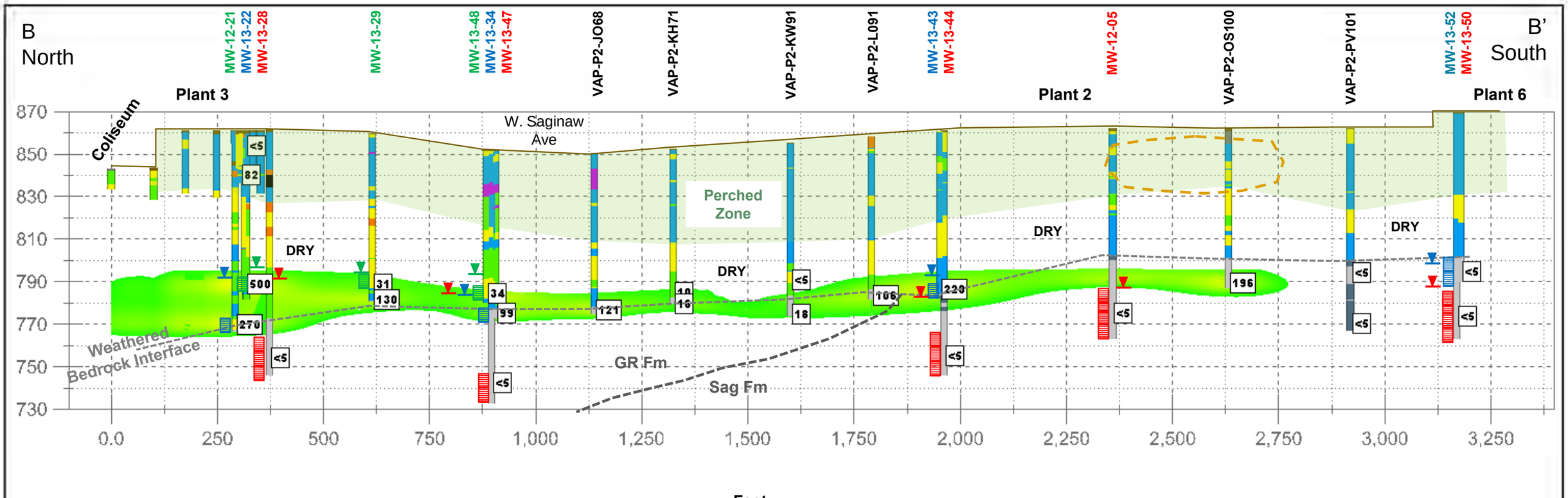
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

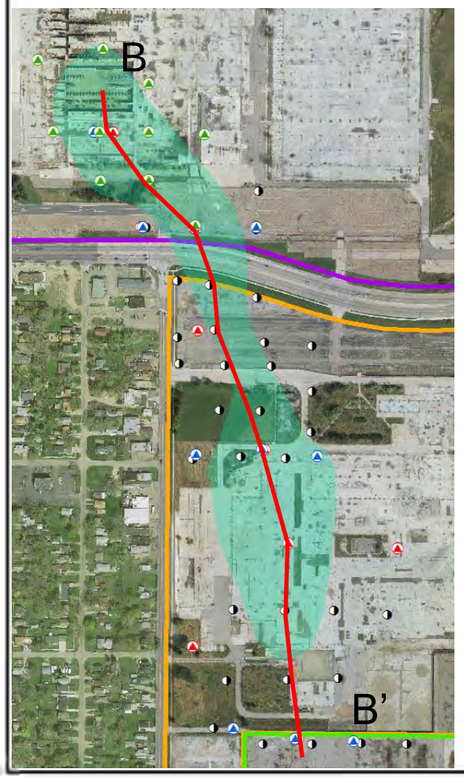
LOWER 1,4-DIOXANE PLUME PLANTS 2 AND 6

ARCADIS

FIGURE 7

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 7 - Plant 2 1,4-d plume.mxd PLOTTED: 2/11/2014 10:22:31 AM BY: dolexa





LEGEND

106 — 1,4-dioxane concentration in groundwater (µg/L)

GR Fm – Grand River Formation – fine to medium grained sandstone

Sag Fm – Saginaw Formation - fine sandstone interbedded with shale

1,4-dioxane in perched groundwater

Approximate Monitoring Well Screen Interval
Green - Deep Overburden
Blue - Weathered Bedrock
Red - Bedrock

Approximate Groundwater Elevation - 12/2013 (color coded for depth)

1,4-DIOXANE PLUME

- 500 ug/L
- 300 ug/L
- 100 ug/L
- 30 ug/L
- 10 ug/L
- <5 ug/L

STRATIGRAPHY

- CONCRETE/ASPHALT/TOPSOIL
- FILL
- GRAVELLY SAND
- SAND
- SANDY SILT/SILT
- SILTY/SANDY/GRAVELLY CLAY
- CLAY
- PEAT
- BEDROCK-SANDSTONE
- BEDROCK-SHALE
- NO RECOVERY

RACER TRUST
PLANTS 2, 3, & 6
LANSING, MICHIGAN

LOWER 1,4-DIOXANE PLUME CROSS SECTION B-B'

ARCADIS

FIGURE 8

MW-13-26
795.88

MW-12-20
794.45

795

796

MW-13-30
794.48

MW-13-24
796.67

MW-12-21
796.96

795

MW-13-23
794.35

MW-13-27
794.92

MW-13-25
795.14

MW-13-29
794.61

MW-13-48
794.28

LEGEND

- GROUNDWATER ELEVATION CONTOUR
- DEEP OVERBURDEN MONITORING WELL
- OTHER DEEP MONITORING WELL
- EXTENT LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
- PLANT 2
- PLANT 3
- PLANT 6

NOTE:

Groundwater elevation measurements collocted on December18, 2013 and provided in feet above mean seal level.

0 130 260

SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

GROUNDWATER ELEVATION DEEP OVERBURDEN DECEMBER 18, 2013

ARCADIS

FIGURE
9

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 9 - Deep Overburden GW Contour 12-13.mxd PLOTTED: 2/14/2014 11:38:56 AM BY: PCurry

MW-13-22
792.08

MW-13-46
788.29

MW-13-34
784.52

MW-13-49
783.61

MW-13-42
788.21

MW-13-43
793.87

MW-13-45
794.11

MW-13-51
799.39

MW-13-52
798

MW-13-53
798.01

790

788

784

786

788

796

LEGEND

- WEATHERED BEDROCK MONITORING WELL
- OTHER DEEP MONITORING WELL
- EXTENT LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
- PLANT 2
- PLANT 3
- PLANT 6

NOTES:

Groundwater elevation measurements collected on December 18, 2013 and provided in feet above mean sea level.

0 240 480

SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

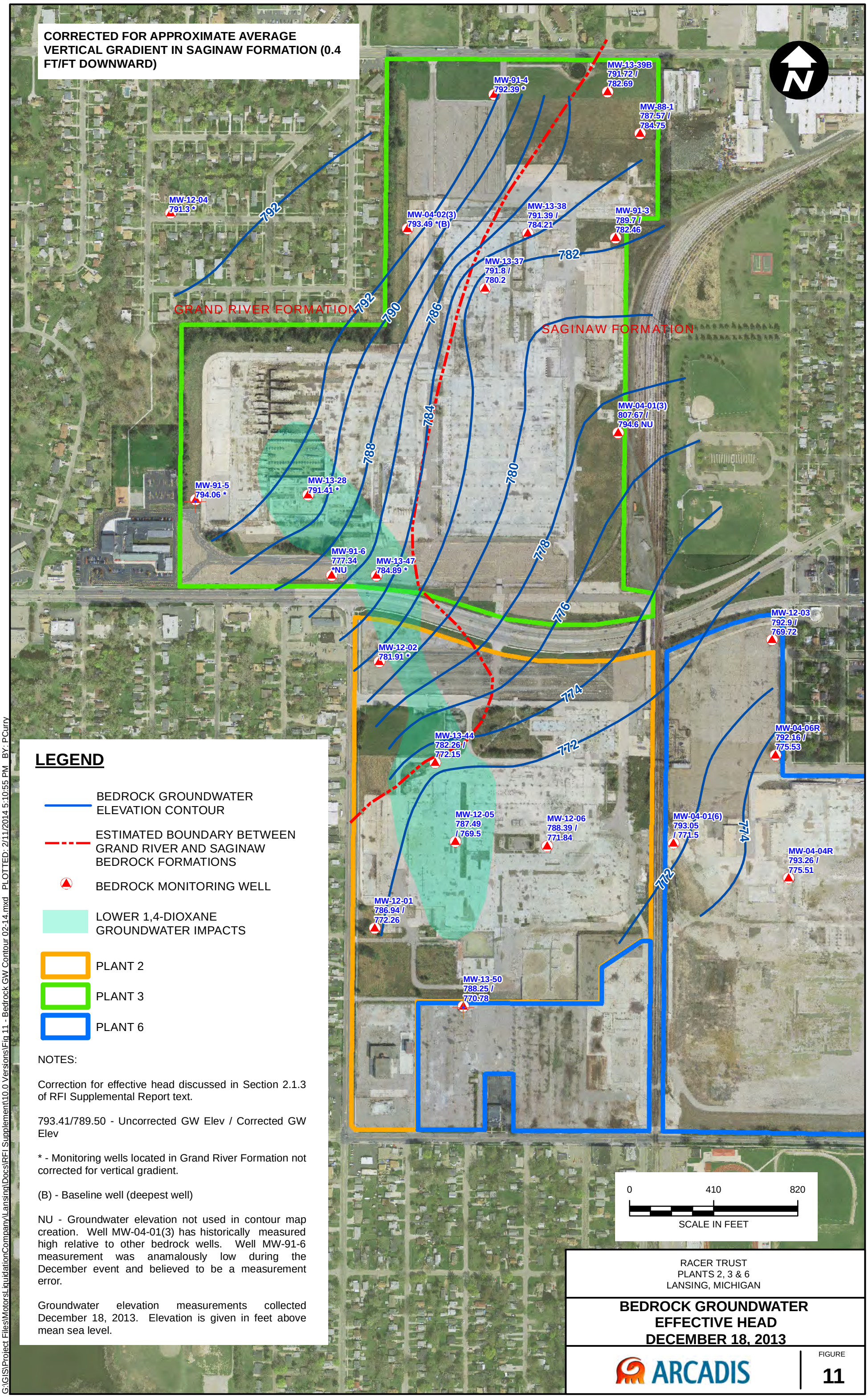
WEATHERED BEDROCK GROUNDWATER ELEVATION DECEMBER 18, 2013

ARCADIS

FIGURE
10

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 10 - Weathered BR GW Contour 12-14rev.mxd PLOTTED: 2/10/2014 2:35:50 PM BY: PCurry

CORRECTED FOR APPROXIMATE AVERAGE VERTICAL GRADIENT IN SAGINAW FORMATION (0.4 FT/FT DOWNWARD)



LEGEND

- BEDROCK GROUNDWATER ELEVATION CONTOUR
- ESTIMATED BOUNDARY BETWEEN GRAND RIVER AND SAGINAW BEDROCK FORMATIONS
- BEDROCK MONITORING WELL
- LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
- PLANT 2
- PLANT 3
- PLANT 6

NOTES:

Correction for effective head discussed in Section 2.1.3 of RFI Supplemental Report text.

793.41/789.50 - Uncorrected GW Elev / Corrected GW Elev

* - Monitoring wells located in Grand River Formation not corrected for vertical gradient.

(B) - Baseline well (deepest well)

NU - Groundwater elevation not used in contour map creation. Well MW-04-01(3) has historically measured high relative to other bedrock wells. Well MW-91-6 measurement was anamalously low during the December event and believed to be a measurement error.

Groundwater elevation measurements collected December 18, 2013. Elevation is given in feet above mean sea level.

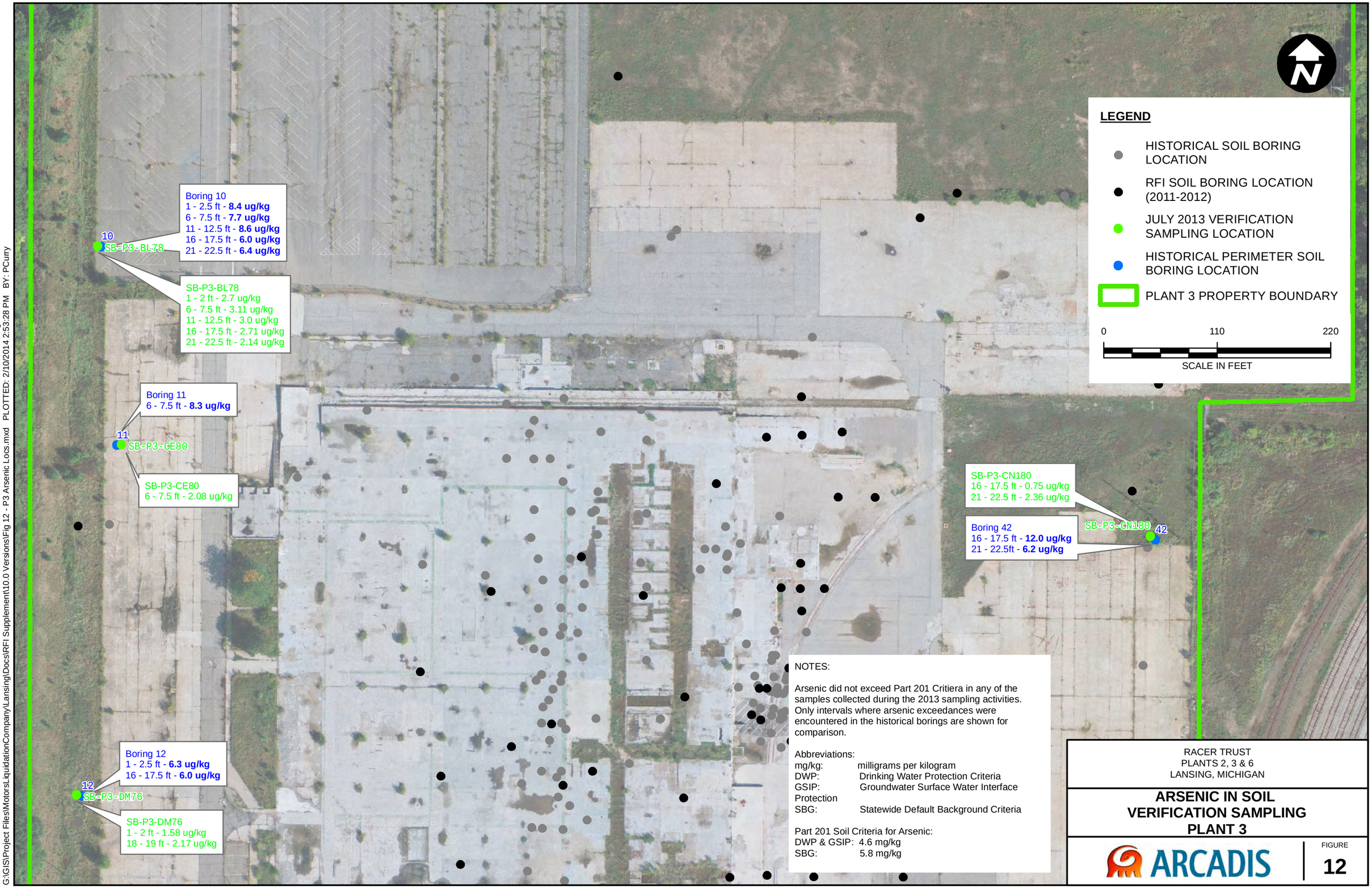
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

BEDROCK GROUNDWATER EFFECTIVE HEAD DECEMBER 18, 2013

ARCADIS

FIGURE
11

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 11 - Bedrock GW Contour 02-14.mxd PLOTTED: 2/11/2014 5:10:55 PM BY: PCurry



NOTES:

Arsenic did not exceed Part 201 Critiera in any of the samples collected during the 2013 sampling activities. Only intervals where arsenic exceedances were encountered in the historical borings are shown for comparison.

Abbreviations:

mg/kg:	milligrams per kilogram
DWP:	Drinking Water Protection Criteria
GSIP:	Groundwater Surface Water Interface Protection
SBG:	Statewide Default Background Criteria

Part 201 Soil Criteria for Arsenic:

DWP & GSIP:	4.6 mg/kg
SBG:	5.8 mg/kg

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

ARSENIC IN SOIL VERIFICATION SAMPLING PLANT 3

ARCADIS

FIGURE
12

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 12 - P3 Arsenic Locs.mxd PLOTTED: 2/10/2014 2:53:28 PM BY: PCurry

NOTES:

White boxes contain soil analytical data. There are no storm drains in the area, therefore only soil concentrations exceeding MDEQ Drinking Water Protection (DWP) and/or Direct Contact (DC) Criteria are noted. Concentrations must exceed Statewide Background Default (SBG) levels, where applicable, to be considered an exceedance. Concentrations in orange exceed DC Criteria. All values are presented in milligrams per kilogram (mg/kg).

Blue boxes contain groundwater analytical data. Only groundwater concentrations exceeding Drinking Water (DW) Criteria are noted. The Health-Based Value (HBV) of manganese is also noted due to its widespread occurrence.

Blue boxes contain groundwater analytical data. Only groundwater concentrations exceeding Part 201 Drinking Water (DW) or Groundwater Surface Water Interface (GSI) Criteria are noted. The Health Based Value (HBV) of manganese is also noted due to its widespread occurrence.

T. Metals indicates total metals in unfiltered groundwater. D. Metals indicates dissolved metals in filtered groundwater. Samples are generally filtered when turbidity is greater than 10 Nephelometric Turbidity Units (NTU). All values are presented in milligrams per liter (mg/L).

Soil Criteria -

Arsenic	DWP: 4.6 mg/kg; SBG: 5.8 mg/kg
Boron	DWP: 10 mg/kg
Cobalt	DWP: 0.8 mg/kg ; SBG: 6.8 mg/kg
Lead	DWP: 700 mg/kg ; DC: 900 mg/kg
Manganese	DWP: 1.0 mg/kg ; SBG: 440 mg/kg

GW Criteria -

Arsenic	DW: 0.01 mg/L
Lead	DW: 0.004 mg/L
Manganese	DW: 0.05 mg/L (HBV: 0.860 mg/L)
Nickel	DW: 0.1 mg/L
Vanadium	DW: 0.0045 mg/L

ADRIAN & BLISSFIELD RAILROAD PROPERTY

SB-A16-HQ168
10 - 11'
Cobalt 8.34 mg/kg
Manganese 508 mg/kg

SB-A16-HU168
9 - 10'
Arsenic 9.97 mg/kg
Boron 10.3 mg/kg
Lead 4,100 mg/kg
Mercury 2.378 mg/kg
19 - 20'
Manganese 465 mg/kg

SB-A16-HU178
14 - 18' VAP Sample
D. Arsenic 0.014 mg/L
D. Manganese 0.315 mg/L

SB-A16-HU181
0 - 1'
Arsenic 9.08 mg/kg
Manganese 450 mg/kg
4 - 5'
Arsenic 16.7 mg/kg
Lead 1,250 mg/kg
10 - 11'
Manganese 457 mg/kg

SB-A16-HU165
15 - 16'
Manganese 503 mg/kg

MW-13-32 (11/8/13)
5 - 10'
T. Manganese 0.737 mg/L
T. Nickel 0.241 mg/L
Turbidity 5.48 NTU

SB-A16-HU178
0 - 1'
Arsenic 15.1 mg/kg
17 - 18'
Arsenic 7.94 mg/kg

SB-A16-HY168
11 - 12'
Arsenic 6.45 mg/kg
Cobalt 7.76 mg/kg
17 - 18'
Cobalt 7.50 mg/kg
Manganese 473 mg/kg

MW-13-31 (11/7/13)
5 - 10'
T. Lead 0.337 mg/L
D. Lead <0.003 mg/L
T. Manganese 0.165 mg/L
D. Manganese 0.058 mg/L
T. Vanadium 0.024 mg/L
D. Vanadium <0.004 mg/L
Turbidity 88.8 NTU

SB-A16-IE168
19 - 23' VAP Sample
D. Arsenic 0.024 mg/L
D. Manganese 0.606 mg/L

MW-13-33 (11/6/13)
12 - 17'
T. Metals < Criteria
D. Metals < Criteria
Turbidity 272 NTU

SB-A16-HP165 SB-A16-HP178 SB-A16-HR162 SB-A16-HU159 SB-A16-HU165 SB-A16-HU168 SB-A16-HU171 SB-A16-HU178 SB-A16-HU181 MW-13-32 SB-A16-HX162 SB-A16-HX165 SB-A16-HY168 MW-13-31 SB-A16-HX176 SB-A16-IE168 MW-13-33 SB-A16-IL168

0 40 80
SCALE IN FEET

LEGEND

- SHALLOW MONITORING WELL
- SOIL BORING LOCATIONS
- SOIL METAL DWP EXCEEDANCE
- SOIL METAL DC EXCEEDANCE

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

METALS IN SOIL AND GROUNDWATER PLANT 3, AREA 16

ARCADIS

FIGURE 13

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 13 - Area 16 Soil Metals Anno.mxd PLOTTED: 2/10/2014 3:04:36 PM BY: PCurry

NOTES:

Blue boxes contain groundwater analytical data. Only groundwater concentrations exceeding Part 201 Drinking Water (DW) or Groundwater Surface Water Interface (GSI) Criteria are noted. The Health Based Value (HBV) of manganese is also noted due to its widespread occurrence.

T. Metals indicates total metals in unfiltered groundwater.
D. Metals indicates dissolved metals in filtered groundwater. Samples are generally filtered when turbidity is greater than 10 Nephelometric Turbidity Units (NTU). All values are presented in milligrams per liter (mg/L)

Part 201 Groundwater Criteria -

Arsenic	DW & GSI: 0.01 mg/L
Chromium (III)	DW: 0.1 mg/L, GSI: 0.16 mg/L
Manganese	DW: 0.05 mg/L (HBV: 0.860 mg/L), GSI: 4.5 mg/L
Nickel:	DW: 0.1 mg/L, GSI: 0.12 mg/L
Vanadium	DW: 0.0045 mg/L, GSI: 0.027 mg/L

MW-12-12

MW-12-12 (11/8/13)
13 - 18'

T. Chromium	0.232 mg/L
D. Chromium	<0.005 mg/L
T. Manganese	0.452 mg/L
D. Manganese	0.284 mg/L
T. Nickel	0.268 mg/L
D. Nickel	0.152 mg/L
Turbidity	114.3 NTU

MW-12-13

MW-12-13 (11/8/13)
13 - 18'

T. Manganese	0.132 mg/L
Turbidity	9.73 NTU

MW-13-36R (12/18/13)
5.5 - 10.5'

T. Vanadium	0.005 mg/L
D. Vanadium	0.005 mg/L

P6-SB-35

P6-SB-35 (11/12/13)
3 - 8'

T. Vanadium	0.021 mg/L
D. Vanadium	0.020 mg/L
Turbidity	9.81 NTU

MW-13-35 (11/5/13)
25 - 30'

T. Manganese	0.252 mg/L
T. Vanadium	0.005 mg/L
Turbidity	8.76 NTU

MW-12-15 (11/6/13)
18 - 23'

T. Manganese	0.338 mg/L
Turbidity	5.21 NTU

MW-13-35 MW-12-16 MW-12-15

MW-12-16 (11/5/13)
28 - 33'

T. Arsenic	0.015 mg/L
D. Arsenic	0.015 mg/L
T. Manganese	0.308 mg/L
Turbidity	1.44 NTU

LEGEND

- SHALLOW MONITORING WELL
- PLANT 2
- PLANT 3
- PLANT 6

0 170 340
SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

OFF-SITE METALS IN GROUNDWATER AREAS 7 & 5-8

ARCADIS

FIGURE
14

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 14 - P6 Off-Site GW Metals.mxd PLOTTED: 2/10/2014 3:24:54 PM BY: PCurry

MW-04-06R MW-04-06

MW-04-06(R) (11/7/13)
74 - 99.5'

T. Arsenic	0.021 mg/L
D. Arsenic	0.021 mg/L
T. Manganese	0.123 mg/L
D. Manganese	0.117 mg/L
T. Selenium	0.006 mg/L
D. Selenium	<0.005 mg/L
Turbidity	21.32 NTU

MW-04-04(R) (11/12/13)
82 - 110'

T. Arsenic	0.021 mg/L
D. Arsenic	0.02 mg/L
Turbidity	23.55 NTU

MW-04-04R MW-04-04(6)

NOTES:

Blue boxes contain groundwater analytical data. Only groundwater concentrations exceeding Part 201 Drinking Water (DW) are noted. The Health Based Value of manganese is also noted due to its widespread occurrence.

Blue boxes contain groundwater analytical data. Only groundwater concentrations exceeding Part 201 Drinking Water (DW) or Groundwater Surface Water Interface (GSI) Criteria are noted. The Health Based Value (HBV) of manganese is also noted due to its widespread occurrence.

T. Metals indicates total metals in unfiltered groundwater.
D. Metals indicates dissolved metals in filtered groundwater.
Samples are generally filtered when turbidity is greater than 10 Nephelometric Turbidity Units (NTU). All values are presented in milligrams per liter (mg/L)

Part 201 Drinking Water Criteria -

Arsenic: 0.01 mg/L
Manganese: 0.05 mg/L, (HBV: 0.860 mg/L)
Selenium: 0.05 mg/L

LEGEND

- ABANDONED BEDROCK MONITORING WELL
- REPLACEMENT BEDROCK MONITORING WELL
- PLANT 2
- PLANT 3
- PLANT 6

0 110 220
SCALE IN FEET

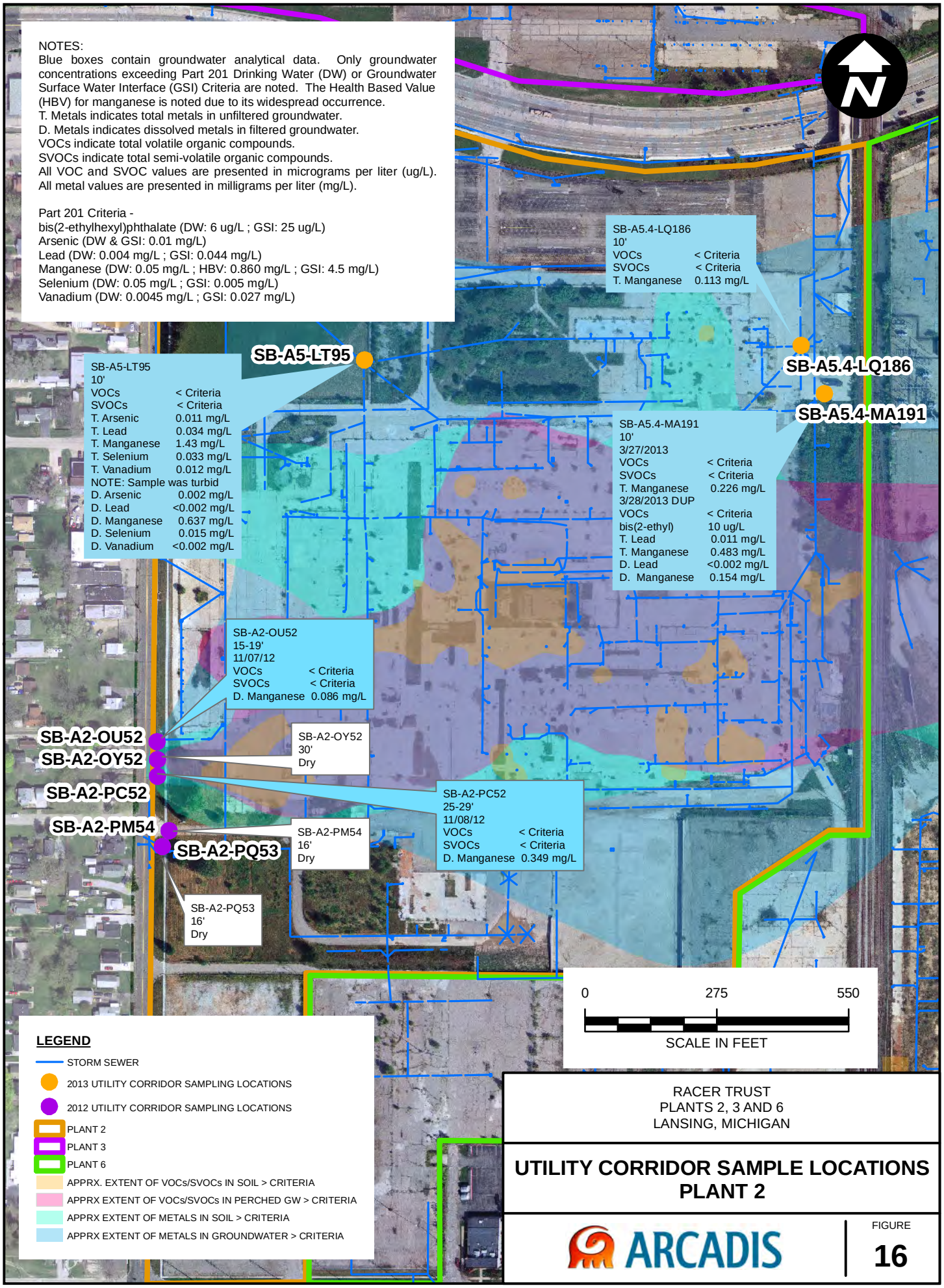
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

BEDROCK REPLACEMENT WELLS PLANT 6

ARCADIS

FIGURE
15

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 15 - P6 BR Wells.mxd PLOTTED: 2/10/2014 3:34:30 PM BY: PCurry



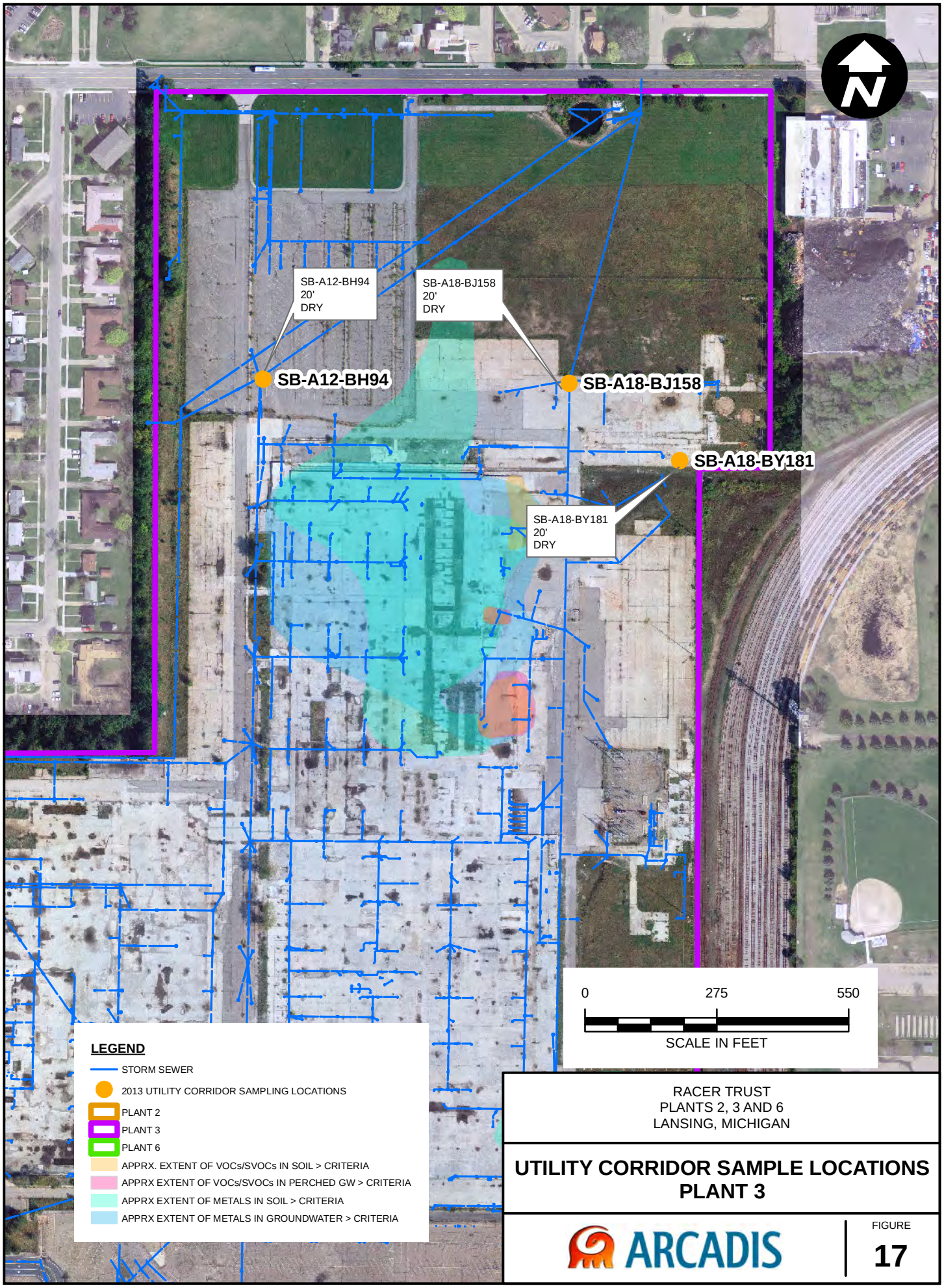
CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 16 - P2 Utility Locs.mxd PLOTTED: 2/12/2014 10:25:57 AM BY: PCurry

RACER TRUST
PLANTS 2, 3 AND 6
LANSING, MICHIGAN

UTILITY CORRIDOR SAMPLE LOCATIONS PLANT 2

ARCADIS

FIGURE
16



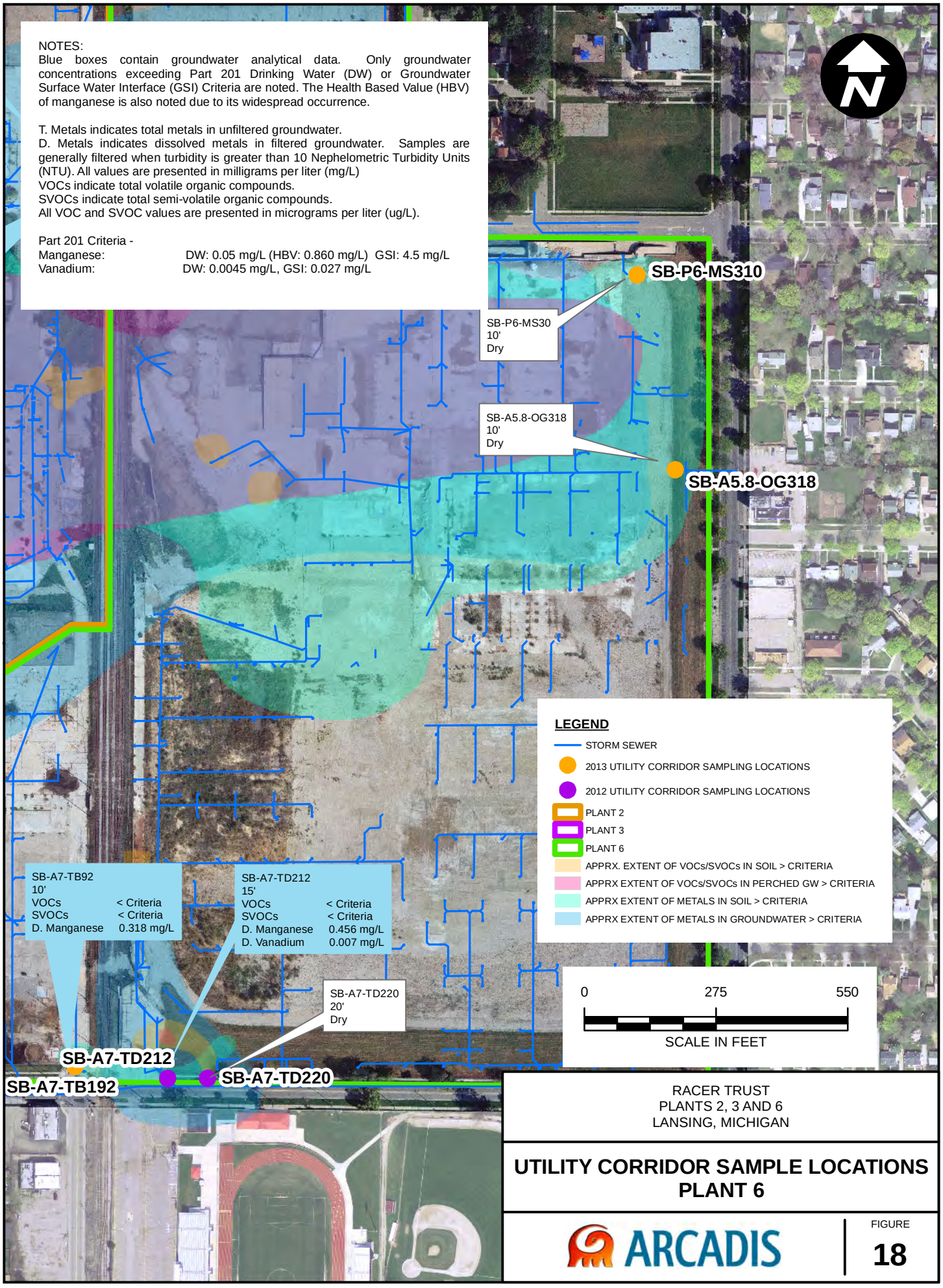
RACER TRUST
PLANTS 2, 3 AND 6
LANSING, MICHIGAN

UTILITY CORRIDOR SAMPLE LOCATIONS PLANT 3

ARCADIS

FIGURE
17

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 17 - P3 Utility Locs.mxd PLOTTED: 2/10/2014 10:03:48 AM BY: PCurry



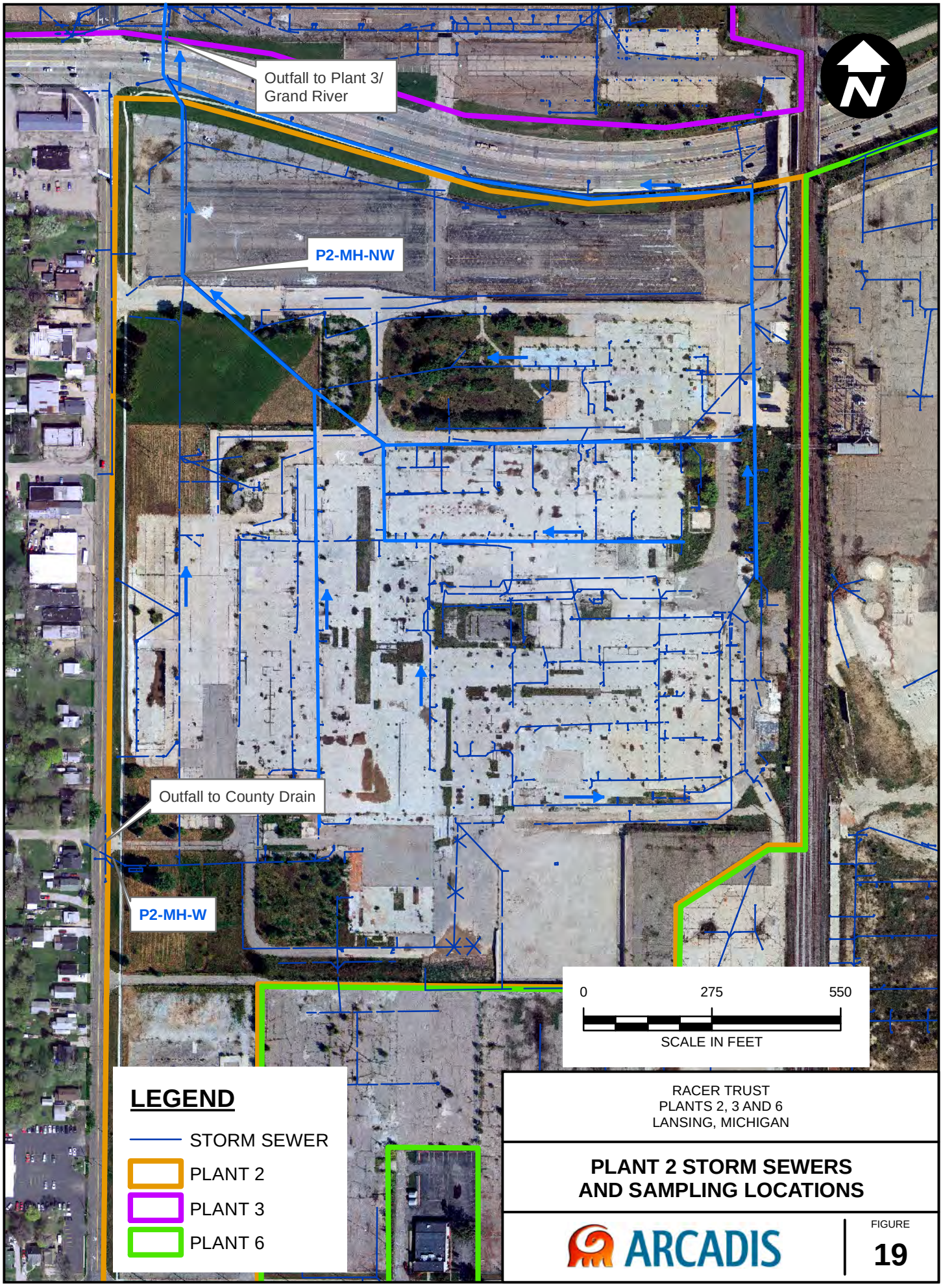
CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 18 - P6 Utility Loc.mxd PLOTTED: 2/10/2014 10:12:12 AM BY: PCurry

RACER TRUST
PLANTS 2, 3 AND 6
LANSING, MICHIGAN

UTILITY CORRIDOR SAMPLE LOCATIONS PLANT 6

ARCADIS

FIGURE
18



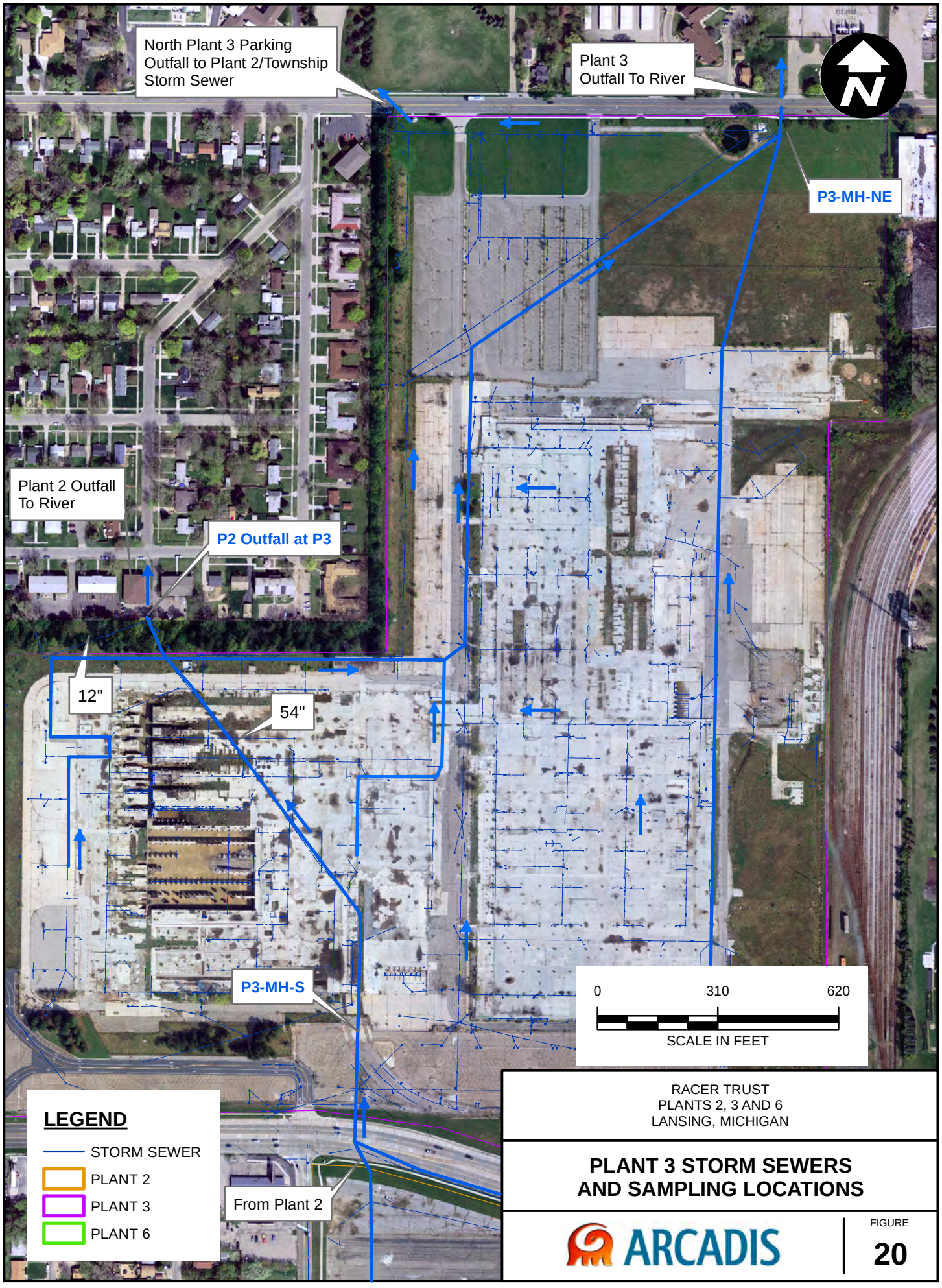
RACER TRUST
PLANTS 2, 3 AND 6
LANSING, MICHIGAN

PLANT 2 STORM SEWERS AND SAMPLING LOCATIONS

ARCADIS

FIGURE
19

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\Fig 19 - Plant 2 SW.mxd PLOTTED: 1/16/2014 2:59:25 PM BY: PCurry



RACER TRUST
PLANTS 2, 3 AND 6
LANSING, MICHIGAN

PLANT 3 STORM SEWERS AND SAMPLING LOCATIONS

ARCADIS

FIGURE
20

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\Fig 20 - Plant 3 SW.mxd PLOTTED: 2/10/2014 10:14:52 AM BY: dolexa

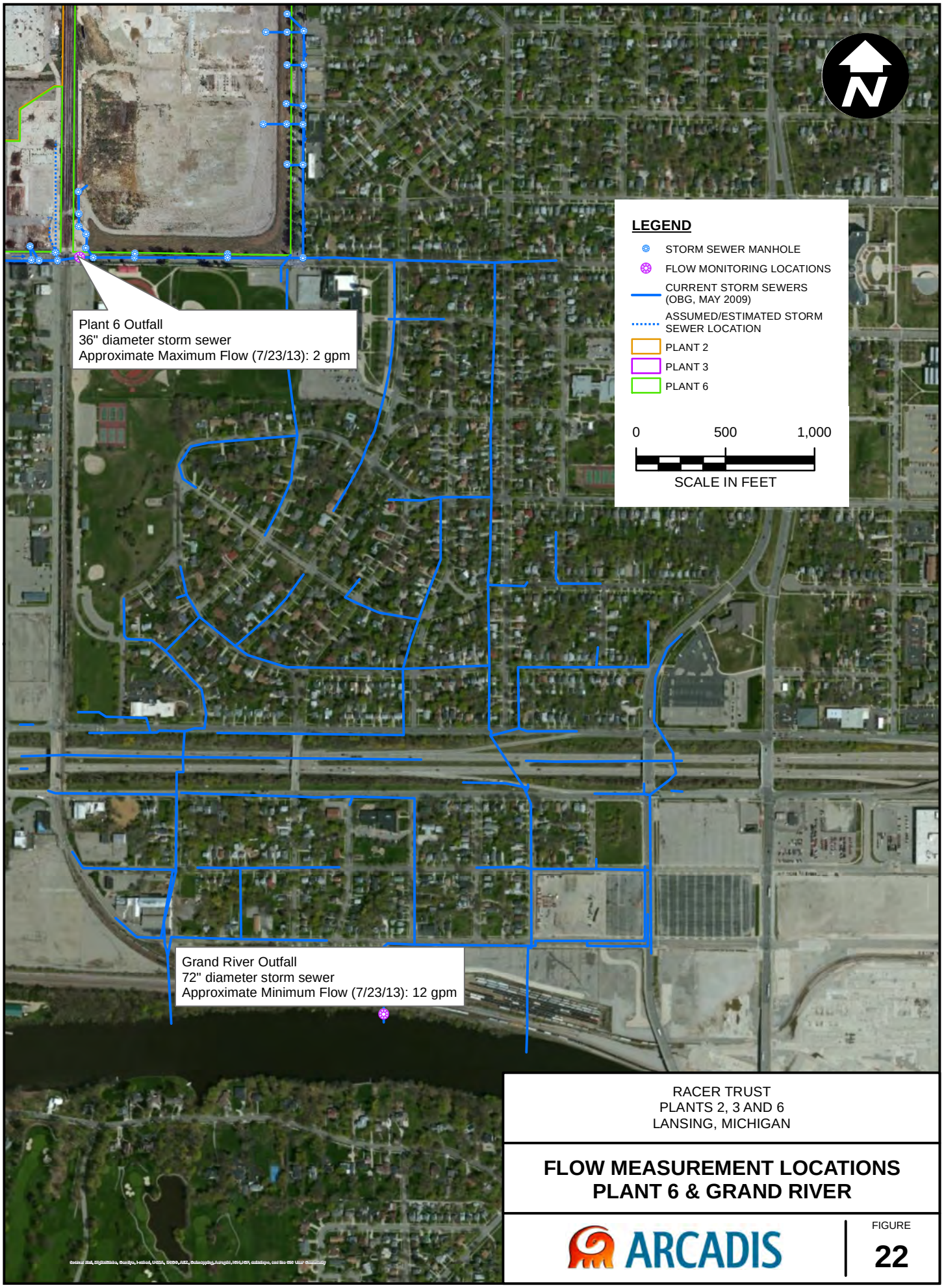
RACER TRUST
PLANTS 2, 3 AND 6
LANSING, MICHIGAN

PLANT 6 STORM SEWERS AND SAMPLING LOCATIONS

ARCADIS

FIGURE
21

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\Fig 21 - Plant 6 SW.mxd PLOTTED: 1/15/2014 2:08:17 PM BY: PCurry



RACER TRUST
PLANTS 2, 3 AND 6
LANSING, MICHIGAN

FLOW MEASUREMENT LOCATIONS PLANT 6 & GRAND RIVER

ARCADIS

FIGURE
22

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\Fig 22 - Plant 6 Flow Outfalls.mxd PLOTTED: 2/10/2014 4:41:37 PM BY: dolexa

NOTES:

Green text indicates a criteria exceedance.

Only groundwater concentrations exceeding Part 201 Drinking Water (DW) are noted. The proposed/potential Drinking Water Criteria for 1,4-dioxane is also included.
All values are presented in micrograms per liter (ug/L)

Abreviations:
VC - Vinyl Chloride
BWL - Lansing Board of Water and Light well location
TWP - Lansing Township well location
BR - bedrock well
VAP - vertical aquifer profile sample

Part 201 Drinking Water Criteria -
1,4-dioxane: Proprosed: 8.5 ug/L, Current: 85 ug/L
Vinyl Chloride 2.0 ug/L

BWL WELL 10-15
Offline
Historic VC impacts

BWL-WELL-10-15 (ABAND)

BWL-WELL-10-10

BWL WELL 10-10
12/2013
130'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L
165'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L
195'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L
220'
VC 2.0 ug/L
1,4-dioxane <5.0 ug/L
260'
VC 2.0 ug/L
1,4-dioxane <5.0 ug/L

MW-04-04 (11/5/13)
72-82'
VC 3 ug/L
1,4-dioxane <5.0 ug/L

MW-04-04
MW-91-4

MW-91-4 (11/5/13)
116-132.5'
VC 11 ug/L
1,4-dioxane <5.0 ug/L

MW-13-39B (11/15/13)
77-82' (VAP)
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L
97-112' (BR)
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-13-39B

MW-88-1 (11/5/13)
103.5-140'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-88-1

MW02-03(3) (11/7/13)
79-89'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW02-04 (11/7/13)
76-86'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-13-40 (12/17/13)
72-77'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-02-03(3)
MW-02-04
MW-13-40

MW-04-03 (11/7/2013)
80-90'
VC 8 ug/L
1,4-dioxane <5.0 ug/L

MW-12-04

MW-04-02
MW-04-03

MW-13-38 (11/6/13)
77-82' (VAP)
VC <1.0 ug/L
1,4-dioxane 47 ug/L
107-124' (BR)
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

VAP-A17-DE144 (5/23/12)
63-64'
VC <1.0 ug/L
1,4-dioxane 11 ug/L

MW-91-3 (11/12/13)
105-117'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-91-3

MW-13-38
MW-13-41

MW-04-02 (11/7/2013)
126-136'
VC 6 ug/L
1,4-dioxane <5.0 ug/L

MW-02-02(3)
MW-93-1

MW-13-41 (12/17/13)
77-82'
VC <1.0 ug/L
1,4-dioxane 13 ug/L

MW-19 (11/14/13)
55-65'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-02-02(3) (11/12/13)
74-84'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-91-2
MW-13-37

MW-19
MW-01(3)
VAP-A17-DE144
MW-23

MW-23 (11/14/13)
52-62'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-22

MW-13-37 (11/6/2013)
67-72' (VAP)
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L
97-112' (BR)
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-91-2 (11/12/13)
68-78'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-22 (11/13/13)
52.5-62.5'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-01(3) (11/14/13)
55-65'
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

MW-02-01(3)
MW-04-01(3)

MW-13-26
MW-12-20
MW-13-30

Vinyl chloride was not detected at any VAP borings or monitoring wells completed as part of the lower 1,4-dioxane investigation.

MW-13-24
MW-13-22
MW-13-23
MW-13-28
MW-12-21
MW-13-27
MW-91-5

MW-13-25
MW-13-29
VAP-P3-IC89

TWP WELL #4 (12/5/2013)
VC <1.0 ug/L
1,4-dioxane <5.0 ug/L

LANSING-TWP-WELL-#4

MW-91-6
MW-13-48
MW-13-46
VAP-P3-IR43
MW-13-34
MW-13-47
VAP-P3-IS88
MW-13-49

LEGEND

- BWL WELL LOCATION
- DEEP OVERBURDEN MONITORING WELL
- WEATHERED BEDROCK MONITORING WELL
- BEDROCK MONITORING WELL
- VAP BORING
- FORMER HEAT TREATING PLANT
- PLANT 2
- PLANT 3
- PLANT 6

0 360 720
SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

VINYL CHLORIDE INVESTIGATION PLANT 3

ARCADIS

FIGURE
23

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
G:\GIS\Project Files\MotorsLiquidationCompany\Lansing\Docs\RFI Supplement\10.0 Versions\Fig 23 - Plant 3 VC Anno.mxd PLOTTED: 2/11/2014 10:30:29 AM BY: dolexa

Appendix A

RFI Summary Matrix

Appendix A
RFI Phase 2 Summary Matrix (rev. February 2014)
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Investigation Area	Subarea	Associated AOI	AOI Summary	RFI Phase 1 Investigation	RFI Phase 2 Investigation Sequence/Results	RFI Phase 2 Supplemental Investigation Sequence/Results	Constituents of Concern > PART 201 RBSLs								Summary of Exceedances	Potential Corrective Measures
							VOCs				SVOCs	PCBs	Metals			
							CVOCs	BTEX	1,4-Dioxane	Other VOCs			CrVI	Other		
Lower 1,4-Dioxane Plants 2, 3, & 6	NA	AREA 11 (AOI ID 3-54)	South of the "Coliseum," a 15-20 ft deep subfloor pit where automotive stamping equipment was formerly housed (Building 304 and 305 press pit operations), Plume extends southeast under Saginaw Ave onto Plant 2, terminating just before the western branch of Plant 6.	No investigation activities were conducted during Phase 1.	During routine groundwater monitoring, elevated concentrations of 1,4-dioxane were encountered in a deep overburden well (MW-12-21) installed south of the Coliseum in Area 11. Resampling confirmed that the results were not a lab error.	**March to April** **Scope:** Based on the high concentration of 1,4-dioxane encountered in deep overburden well MW-12-21, one bedrock well (MW-13-28) and nine deep overburden wells were installed in the southwestern portion of Plant 3 to define the vertical and horizontal extent of the impacts. Deep overburden wells were drilled to the bedrock interface and sampled before the permanent well was set at a depth consistent with the impacts encountered at MW-12-21. **Results:** The plume was delineated horizontally to the north and west. 1,4-dioxane was not encountered in bedrock. Elevated concentrations of 1,4-dioxane were encountered in wells installed southeast of MW-12-21. **July to August** **Scope:** Based on the results of the March and April well installation, VAP borings were advanced at Plants 2 & 3 to delineate the vertical and horizontal extent of the plume. 4 VAP borings were advanced at Plant 3 and 17 VAP borings were advanced at Plant 2 following the 1,4-dioxane impacts. Samples were collected from the deep overburden where groundwater was encountered and from the weathered bedrock. **Results:** The plume was delineated horizontally in Plant 3 and to the east and west in the northern portion of Plant 2. Elevated concentrations of 1,4-dioxane were encountered in the deep overburden at Plant 2 continuing southeast. **October to November** **Scope:** Based on the results of the July and August VAP sampling, additional VAP borings were advanced at Plants 2 & 6 to delineate the vertical and horizontal extent of the plume. 8 VAP borings were advanced at Plant 2 and 4 VAP borings were advanced at Plant 6 following the 1,4-dioxane impacts. Samples were collected from the deep overburden where groundwater was encountered and from weathered bedrock. 4 bedrock and 9 deep overburden wells were installed across Plants 2, 3, & 6 to provide permanent monitoring locations for the lower plume. **Results:** The plume was delineated horizontally and vertically across Plants 2, 3, and 6.			X	X				X	GW: 1,4-dioxane & VOCs > DW Metals > DW	1) Restrict potable use of groundwater on-site. 2) Capping of coliseum 3) Source Treatment 4) Pump & Treat / Directed Groundwater Recirculation
AREA 1	NA	AOI 2-16	Two 20,000-gallon tanks that stored gasoline and diesel east of Building 250. One 1,500-gallon tank that stored used oil located southeast of Building 250. One 12,000-gallon tank that stored heating oil located west of Building 250. All USTs removed in 1990 and 1991. Closure report submitted on 10/01/1996. Restrictive Covenant filed with Register of Deeds in 2003.	**Phase 1 Scope:** Collected samples from monitoring wells MW-01(2), MW-02(2), and MW-03(2). **Results:** MTBE detected below MDEQ Part 201 Criteria. Copper and manganese detected above DWC and/or GSI Criteria in two of the three samples.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to a depth of 25 ft bgs around MW-01(2) to assess low-level VOCs and metals in soil and groundwater. Soil samples were collected at approximate 10 ft intervals through vadose zone based on field screening results. Groundwater samples were collected from saturated permeable zones (if encountered). One HPT/VAP boring was completed to 50 ft bgs to characterize the stratigraphy and define groundwater impacts vertically. **Results:** VOCs detected in soil below Part 201 Criteria. VOCs detected in groundwater exceeding Part 201 Criteria. VOC, SVOC and metal exceedances delineated vertically. **II. Characterization** **Scope:** Three additional step-out soil borings completed, two north of the area and one to the west, to 20 ft bgs to delineate soil and groundwater impacts horizontally. Soil sampled at approximate 5 ft intervals based on field screening. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** VOCs, SVOCs, and metals in soil and groundwater delineated horizontally. **III. Delineation** **Scope:** One monitoring well installed and sampled north of Area to provide a permanent monitoring point for delineation of groundwater impacts. **Results:** Sampling of the four permanent monitoring wells indicates no exceedances of Part 201 Criteria.	COCs defined; no additional work completed		X			X			X	SOIL: SVOCs > GSIP Metals > DWP & GSIP GW: VOCs & SVOCs > GSI Metals > DW & GSI NOTES: Soil and groundwater impacts defined on-site both vertically and horizontally. COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site.
AREA 2	NA	AOI 2-12 AOI 2-52 AOI ID 2-26	Empty 55-gallon drums generated from facility operations.	**Phase 1 Scope:** Soil boring P2-SB-31 was advanced to 10 ft bgs, samples collected at highest PID reading interval and deepest interval. **Results:** No VOCs detected. SVOCs detected at 1-2 ft bgs, ND at 9-10 ft bgs. No exceedances of Part 201 Criteria. Cobalt and manganese detected above Soil DWP and GSIP Criteria in both samples.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to a depth of 20 ft bgs to assess SVOCs and metals in soil. Soil was sampled at approximate 10 ft intervals through vadose zone based on field screening results. **Results:** VOCs (PCE) detected in soil exceeding MDEQ Part 201 Criteria, generally between 15 and 20 ft bgs. **II. Characterization** **Scope:** Eight additional step-out soil borings were completed to 30 ft bgs to define VOCs in soil. Soil was sampled at approximate 5 ft intervals through vadose zone. Groundwater sampled from saturated permeable zones (if encountered). One HPT/VAP boring was completed to bedrock (or refusal) to characterize stratigraphy and define VOC impacts vertically in soil and groundwater. VAP boring soil/gw samples collected at approximate 5 ft intervals beginning at 20 ft bgs. **Results:** PCE in soil defined vertically and horizontally. PCE in groundwater exceeding Part 201 Criteria was encountered between the soil impacts and Plant 2 property boundary; BTEX detected in soil and groundwater exceeding MDEQ Part 201 Criteria on east side of Area. **III. Delineation** **Scope:** Seven additional step-out borings completed to 30 ft bgs east and west of Area. Soil was sampled at approximate 5 ft intervals through vadose zone. Groundwater sampled from saturated permeable zones (if encountered). Two soil gas samples collected in the vicinity of benzene soil SVIIC exceedances on east side of Area. Soil borings completed and one monitoring well installed along western property boundary to define PCE in groundwater at property boundary. **Results:** PCE in soil and groundwater completely defined. BTEX in soil and groundwater appears to merge with impacts from adjacent areas (Areas 5-2 and 5-3). Soil gas results did not indicate exceedances of draft risk-based soil gas screening levels.	COCs defined; no additional work completed	X	X		X			X	SOIL: VOCs > DWP, GSIP & SVIIC Metals > DWP, GSIP, DC & PSIC GW: VOCs > DW, GSI, and draft $GW_{VI\text{-}nr}$ Metals > DW NOTES: PCE in soil up to 15,300 µg/Kg (>DWP/GSIP) delineated. PCE in groundwater defined at Site property boundary. Benzene in soil up to 15,300 µg/Kg (>DWP/GSIP/ SVIIC) defined to SVIIC. Benzene and isopropylbenzene in groundwater > draft GWVI-nr. Soil gas sampling indicates soil gas VOCs below draft screening levels. COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site. 2) Exposure barrier for soil DC (As) and PSIC (Mn) exceedances. 3) Require exposure barrier for VI or additional data to show not a concern. 4) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 3	NA	AOI 2-11	Monitoring well P2-MW-03 in northwestern corner of Plant 2 with 1,4-dioxane in groundwater	**Phase 1 Scope:** Installed permanent monitoring well P2-MW-03 to assist with horizontal gradient determination. Soil samples collected at ground surface, 20 ft bgs, and bottom of boring. Groundwater samples collected following installation. **Results:** VOCs, SVOCs, and metals < Part 201 Criteria in soil. In groundwater, 1,4-dioxane and manganese detected above Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, one HPT/VAP boring was completed to bedrock (or refusal) to characterize the stratigraphy and define groundwater impacts vertically. Groundwater sampled at 30 ft bgs. Groundwater not encountered from 30 feet to bedrock. **Results:** 1,4-Dioxane and metals arsenic and manganese concentrations exceeding Part 201 Criteria encountered in VAP sample; 1,4-dioxane exceeds proposed DWC of 8.5 µg/L. Impacts suspected to be associated with former Adam's Plating Company located 300 feet west of Area 3.	COCs defined; no additional work completed			X				X	GW: 1,4-dioxane > Proposed DW (8.5 µg/L) Metals > DW & GSI NOTES: 1,4-Dioxane at this location associated with Former Adam's Plating Facility.	1) Restrict potable use of groundwater on-site.

Appendix A
RFI Phase 2 Summary Matrix (rev. February 2014)
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Investigation Area	Subarea	Associated AOI	AOI Summary	RFI Phase 1 Investigation	RFI Phase 2 Investigation Sequence/Results	RFI Phase 2 Supplemental Investigation Sequence/Results	Constituents of Concern > PART 201 RBSLs								Summary of Exceedances	Potential Corrective Measures
							VOCs				SVOCs	PCBs	Metals			
							CVOCs	BTEX	1,4-Dioxane	Other VOCs			CrVI	Other		
AREA 4	NA	AOI 2-8	Likely stored waste paint, spent solvent, and used oils on a concrete pad.	**Phase 1 Scope:** Soil boring P2-SB-33 was advanced to 10 ft bgs, with samples collected at 5 ft intervals. **Results:** No VOCs detected. SVOCs detected at 5-6 ft bgs, but not at 9-10' bgs (<Part 201 Criteria). Metals < Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to a depth of 25 ft bgs to assess SVOCs in soil. Soil samples were collected at approximate 10 ft intervals through vadose zone based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** Low-level SVOCs delineated vertically and horizontally in soil and groundwater. Boron, cobalt, selenium, silver, and zinc detected in soil exceeding Part 201 Criteria at 1-2 and 10-11 ft bgs. **III. Delineation** **Scope:** One step-out soil boring was completed to 20 ft bgs beyond western Site boundary and sampled for select metals. Soil samples were collected at approximate 10 ft intervals. Groundwater sample collected from saturated permeable zone. **Results:** Metals in soil exceeding Part 201 Criteria defined to the east by borings from neighboring Areas (Areas 5-1 and 5-2). Selenium exceeds GSIP in soils in boring completed across the street. Manganese exceeded the health-based DWC in two groundwater samples.	COCs defined; no additional work completed							X	SOIL: Metals > DWP & GSIP GW: Metals > DW NOTES: Manganese in groundwater is likely due to naturally occurring background concentrations. COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site.
AREA 5	5-1	AOI 2-11 AOI ID 2-31 ID 2-32 ID 2-33 ID 2-34 ID 2-35 ID 2-49	Press Pit and Associated Sumps, Pits, and Trenches ID 2-31 - Two 3'x3' oil containment sumps under hydraulic presses ID 2-32 - Two oil containment sumps, 3'x3' and trench ID 2-33 - Two oily waste line manhole sumps ID 2-34 - Two Press Pits ID 2-35 6" deep Tramp Oil trenches, 3' deep Tramp Oil sumps	**Phase 1 Scope:** Four soil borings were advanced to 20 ft bgs, with samples collected at surface, highest PID reading interval, and deepest interval. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** No VOCs detected. Low-level SVOCs detected in soil and groundwater (<Part 201 Criteria). Lead and manganese in GW detected above MDEQ Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, 10 step-out soil borings were completed to 20 ft bgs to assess SVOCs and metals in soil. Soil samples were collected at approximate 10 ft intervals through vadose zone based on field screening results. Groundwater samples were collected from saturated permeable zones (if encountered). Two HPT/VAP borings were completed to bedrock (or refusal) to characterize the stratigraphy and define groundwater impacts vertically. Groundwater samples were collected from saturated permeable zones (if encountered). **Results:** SVOCs detected in soil exceeding Part 201 Criteria between 4-5 ft bgs, delineated vertically. Cobalt, selenium, and silver in soil exceeding Part 201 Criteria delineated vertically. Arsenic, boron, lead detected in groundwater exceeding Part 201 Criteria encountered generally between 10-15 ft bgs across area. Manganese exceeded the health-based DWC in one groundwater sample. SVOCs and metals in soil and groundwater appear to merge with impacts from adjacent areas (Areas 4, 5-2, 5-5, and 8).	**Utility Corridor Investigation** **Scope:** To address potential contaminant migration concerns through the utility corridor, one soil boring was advanced to 10 ft bgsin the vicinity of storm sewer lines northwest of the area. **Results:** VOCs, SVOCs, and metals were not encountered above Part 201 Criteria.			X		X			X	SOIL: SVOCS > DWP, GSIP, & DC Metals > DWP & GSIP GW: VOCs > DW 1,4-dioxane > Proposed DW (8.5 µg/L) & DW SVOCs > DW Metals > DW & GSI NOTES: Manganese in groundwater is likely due to naturally occurring background concentrations. COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site. 2) Exposure barrier for soil DC (PAHs) exceedances. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 5	5-2	AOI 2-6 AOI 2-14 AOI ID 2-36	ID 2-6 - SWMU 6 - Former Oily Waste Treatment System. Three 10,000-gallon concrete tanks, two treatment tanks, two gravity separators, chemical storage tanks. ID 2-14 - SWMU 14 - Former Scrap Metal Storage Areas. Stored non-hazardous scrap metal (machining chips, turnings, trimmings, and scrap parts). ID 2-26 - Quench Oil Operations, pits, tanks, and sumps. ID 2-36 - Oil Separator and Sump. 10" oily waste line runs to separator. ID 2-52 - Pickling Room. Concrete wall and acid-resistant floor.	**Phase 1 Scope:** Ten soil borings were advanced to an average 20 ft bgs, with samples collected at highest PID reading interval and deepest interval. **Results:** VOCs and SVOCs detected at 0-10 ft bgs, with criteria exceedances at 4-7 ft bgs in two samples. Manganese detected above MDEQ Part 201 Criteria at 2-6 ft bgs in three samples. LNAPL detected at P2-SB-37 temporary well.	**I. Assessment** **Scope:** Based on Phase 1 results, 38 step-out soil borings were completed to a depth of 25 ft bgs to assess VOCs, SVOCs, metals and LNAPL impacts in soil and groundwater. Soil samples were collected at approximate 5 ft intervals through vadose zone based on field screening results. Groundwater samples collected where saturated permeable zones were encountered. Five HPT/VAP borings were completed to bedrock (or refusal) to characterize the stratigraphy and define soil and groundwater impacts vertically. Samples were collected at approximate 5 ft intervals at each VAP boring. LIF borings (51 total) were completed to 30 ft bgs to delineate the NAPL plume. **Results:** VOCs, SVOCs and metals detected in soil and groundwater exceeding Part 201 Criteria generally associated with the LNAPL impacts. Manganese exceeded the health-based DWC in one groundwater sample. PCBs in LNAPL and detected in soil up to 22,000 µg/Kg. Extent of LNAPL defined vertically and horizontally with LIF. A VOC plume, generally 1,4-dioxane, extends from LNAPL plume to the east across Plant 6. **II. Characterization** **Scope:** Two bedrock wells installed near LNAPL plume to verify no impacts to bedrock aquifer. Groundwater samples collected following installation. **Results:** COCs not detected in bedrock above Part 201 Criteria. **III. Delineation** **Scope:** Install nine LNAPL monitoring wells in LNAPL plume as part of LNAPL mobility study and to provide permanent LNAPL monitoring locations. **Results:** Free-phase LNAPL accumulates in most of the wells. LANPL samples and mobility/recoverability testing indicates LNAPL plume is stable (not mobile), with limited recoverability.	COCs defined; no additional work completed	X	X	X	X	X	X	X	SOIL: VOCs > DWP, GSIP, & SVIIC SVOCs > DWP, GSIP, VSIC, & DC PCBs > DC Metals > DWP, GSIP, DC & PSIC GW: VOCs > DW & GSI 1,4-dioxane > Proposed DW (8.5 µg/L) & DW SVOCs > DW, GSI, GC & Sol PCBs > DW, GSI, $GW_{VI\text{-}Ctrl}$, GC & Sol Metals > DW & GSI NOTES: Elevated VOCs, SVOCs, PCBs, and metals associated with LNAPL plume. Manganese in groundwater is likely due to naturally occurring background concentrations. COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site. 2) Require an exposure barrier (intact concrete) for soil DC and inhalation exceedances, as well as NAPL. 3) Require an exposure barrier or data indicating that VI is not a concern in this area. 4) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 5	5-3	AOI 2-1 AOI ID 2-59 Misc. Data Gap Borings	Press Pits - 8' - 4" deep, 21' by 35', and 67' by 25'	**Phase 1 Scope:** Five soil borings were advanced to an average 30 ft bgs, with samples collected at highest PID reading interval and deepest interval. **Results:** VOCs detected above MDEQ Part 201 Criteria generally between 5-10 ft bgs. SVOCs and manganese detected above MDEQ Part 201 Criteria on west side of Area between 4-6 ft bgs.	**I. Assessment** **Scope:** Based on Phase 1 results, 17 step-out soil borings were completed to a depth of 20 ft bgs to assess VOCs, SVOCs, and metals in soil. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples were collected from saturated permeable zones (if encountered). Two HPT/VAP borings were completed to bedrock (or refusal) to characterize the stratigraphy and define soil and groundwater impacts vertically. VAP soil/gw samples were collected at approximate 5 ft intervals. **Results:** 1,4-Dioxane detected in groundwater exceeding Part 201 Criteria. VOCs and SVOCs detected in soil exceeding Part 201 Criteria in the southeastern corner of Area. Metals including silver, manganese, arsenic and cobalt detected in soil or groundwater exceeding Part 201 Criteria. **II. Characterization** **Scope:** Three additional step-out soil borings were completed to 30 ft bgs in southeastern corner to delineate VOCs and SVOCs. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** VOCs and SVOCs in soil delineated. 1,4-Dioxane and metals in groundwater appear to merge with impacts to the north and east (Areas 5-2 and 5-5).	COCs defined; no additional work completed	X	X	X	X	X		X	SOIL: VOCs > DWP, GSIP, & SVIIC SVOCs > DWP, GSIP, & DC Metals > DWP, GSIP & PSIC GW: VOCs > GSI 1,4-dioxane > Proposed DW (8.5 µg/L) & DW Metals > DW & GSI NOTES: COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site. 2) Require an exposure barrier (intact concrete) for soil DC (PAHs) and inhalation (Mn) exceedances. 3) Require an exposure barrier or data indicating that VI is not a concern in this area. 4) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 5	5-4	AOI ID 2-39	Fuel Oil Pump House and Tank Farm - Eight oil storage tanks, 10.5' diameter. Trenching associated with tanks. Three truck unloading stations associated with tanks.	**Phase 1 Scope:** Three soil borings were advanced to an average of 20 ft bgs, with samples collected at highest PID interval and deepest interval. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** Low-level VOCs encountered between 4-5 ft bgs (<Part 201 Criteria) in soil. No VOCs or SVOCs encountered in groundwater.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to a depth of 20 ft bgs to assess low-level VOCs in soil. Soil sampled at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** All VOC and SVOC concentrations less than Part 201 Criteria. Arsenic detected in grounwater exceeding the Part 201 Criteria.	**Utility Corridor Assessment** **Scope:** To address potential contaminant migration concerns through the utility corridor, two soil borings were advanced to 10 ft bgs northwest of the area and in the northwestern corner of the area in the vicinity of storm sewer lines. **Results:** VOCs and metals were not encountered above Part 201 GSI Criteria. bis(2-ethylhexyl)phthalate was detected above Part 201 Criteria in one boring; however, this is believed to be a lab contaminant.							X	GW: Metals > DW & GSI NOTES: COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site.

Appendix A
RFI Phase 2 Summary Matrix (rev. February 2014)
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Investigation Area	Subarea	Associated AOI	AOI Summary	RFI Phase 1 Investigation	RFI Phase 2 Investigation Sequence/Results	RFI Phase 2 Supplemental Investigation Sequence/Results	Constituents of Concern > PART 201 RBSLs								Summary of Exceedances	Potential Corrective Measures
							VOCs				SVOCs	PCBs	Metals			
							CVOCs	BTEX	1,4-Dioxane	Other VOCs			CrVI	Other		
AREA 5	5-5	AOI 2-15	AOC 1 - Building 225 UST Farm - Two 20,000-gallon tanks that stored gasoline and diesel east of Building 250. One 1,500-gallon tank that stored used oil located southeast of Building 250. One 12,000-gallon tank that stored heating oil located west of Building 250. All USTs removed in 1990 and 1991. Closure report submitted on 10/01/1996. Restrictive Covenant filed with Register of Deeds in 2003.	**Phase 1 Scope:** Two soil borings were advanced to 20 ft bgs, with samples collected at highest PID interval and deepest interval. Permanent monitoring well P2-MW-04 was installed and sampled at surface and deepest interval. Groundwater samples collected following installation. **Results:** 1,4-Dioxane and manganese in GW exceeding MDEQ DW Part 201 Criteria encountered in groundwater. SVOCs, VOCs, and arsenic exceeding MDEQ Part 201 Criteria encountered in soil generally between 1-3 ft bgs.	**I. Assessment** **Scope:** Based on Phase 1 results, nine step-out soil borings were completed to a depth of 20 ft bgs to assess VOCs, SVOCs, and metals in soil. Soil samples were collected at approximate 5 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). One HPT/VAP boring was completed to bedrock (or refusal) in the vicinity of the permanent monitoring well to characterize the stratigraphy and define soil and groundwater impacts vertically. VAP soil/gw samples were collected at approximate 5 ft intervals. **Results:** 1,4-Dioxane detected in groundwater exceeding Part 201 Criteria in the VAP boring. Arsenic detected in groundwater exceeding Part 201 Criteria along eastern Area boundary adjacent to railroad tracks. VOCs and metals arsenic, cobalt, and manganese defined vertically and appear to merge with impacts in adjacent areas (Area 5-2, 5-6).	COCs defined; no additional work completed	X	X	X	X	X	X		X	SOIL: VOCs > DWP SVOCs > GSIP & DC Metals > DWP, GSIP & PSIC GW: 1,4-dioxane > Prop DW (8.5 µg/L) SVOCs > DW Metals > DW & GSI NOTES: Manganese in groundwater is likely due to naturally occurring background concentrations. Manganese exceedance of the PSIC is deep (56-57') and therefore, is not a concern, as soil this deep is not likely to be brought to the surface. COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for DC (PAHs) exceedances. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 5	5-6	AOI 6-18 AOI 6-48	AOC 1 - Building 225 UST Farm - Eight former 30,000-gallon tanks. Removed 1989. Closure report submitted 10/1/96.	**Phase 1 Scope:** Two soil borings were advanced to 10 ft bgs, with samples collected at highest PID interval and deepest interval. Groundwater samples were collected from saturated permeable zones (if encountered). Groundwater samples were also collected at seven permanent monitoring well locations. **Results:** 1,4-Dioxane, VOCs, and metals lead and arsenic exceeding Part 201 Criteria encountered in groundwater. Low-level VOCs and SVOCs encountered in soil (<Part 201 Criteria). Manganese exceeding Part 201 Criteria encountered in soil throughout.	**I. Assessment** **Scope:** Based on Phase 1 results, 15 step-out soil borings were completed to an average depth of 15 ft bgs to assess impacts in soil and groundwater. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). Six HPT/VAP borings were completed to bedrock (or refusal) in the vicinity of permanent monitoring wells to characterize the stratigraphy and define soil and groundwater impacts vertically. VAP boring soil/gw samples collected at approximate 10 ft intervals. **Results:** 1,4-Dioxane detected in groundwater exceeding Part 201 Criteria in three VAP borings at 35-40 ft bgs, defined vertically and merge with groundwater impacts in adjacent areas. VOCs detected in groundwater exceeding Part 201 Criteria defined vertically. VOCs detected in soil exceeding Part 201 Criteria defined vertically and by adjacent areas. Arsenic, barium, cadmium, cobalt, copper, lead, manganese, mercury, selenium, silver, and zinc detected in soil exceeding Part 201 Criteria at 0-7 ft bgs, delineated vertically and generally merge with impacts in adjacent areas. Manganese detected above the health-based DWC in 3 groundwater samples.	**Bedrock Well Replacement** **Scope:** Arsenic, cobalt, lead, and vanadium encountered in groundwater at historic bedrock well MW-04-04 historically exceeded Part 201 DW Criteria; however, the well was damaged and had been removed from routine monitoring. The original MW-04-04 was replaced by a new bedrock well [MW-04-04(R)] at the same approximate location with a total depth of 110 ft bgs and routine monitoring was reinstated. **Results:** Total and dissolved arsenic were detected in groundwater above Part 201 Criteria. Other metals were detected but did not exceed Part 201 Criteria.	X	X	X	X	X			X	SOIL: VOCs > DWP & GSIP Metals > DWP, GSIP, & DC GW: VOCs > DW & GSI 1,4-dioxane > Prop DW (8.5 µg/L) Metals > DW & GSI NOTES: Manganese in groundwater is likely due to naturally occurring background concentrations. Only COC detected in Plant 6 storm sewer samples above GSI criteria was selenium, which was not detected in gw above GSI criteria in Area 5-6.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for DC (lead) exceedances. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 5	5-7	AOI 6-43 AOI 6-88	ID 6-43 - Stormceptor - Includes stormceptor oil and sediment separator ID 6-88 - Parking Lot Exceedance	**Phase 1 Scope:** Four soil borings were advanced to 10 ft bgs, with samples collected at highest PID interval and deepest interval. Groundwater samples were collected from saturated permeable zones (if encountered). Groundwater samples were also collected at four permanent monitoring well locations. **Results:** BTEX exceeding MDEQ Part 201 Criteria encountered in groundwater and soil at 7-10 ft bgs. Low-level SVOCs encountered in all borings (<Part 201 Criteria). Metals antimony and cadmium encountered in soil exceeding Part 201 Criteria between 5-7 ft bgs. Metals lead and antimony encountered in groundwater above Part 201 Criteria throughout Area.	**I. Assessment** **Scope:** Based on Phase 1 results, eight step-out soil borings were completed to an average depth of 20 ft bgs to assess VOCs and metals in soil and groundwater. Soil samples were collected at approximate 5 ft to 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). Three HPT/VAP borings were completed to bedrock (or refusal) to characterize the stratigraphy and define soil and groundwater impacts vertically. VAP soil/gw samples were collected at approximate 5 ft intervals. **Results:** VOCs (BTEX) detected in groundwater exceeding Part 201 Criteria delineated to the north. Vinyl chloride detected in groundwater exceeding Part 201 Criteria at eastern property boundary. BTEX detected in soil exceeding Part 201 Criteria delineated vertically and horizontally. TCE detected in soil exceeding Part 201 Criteria (including SVIIC) at 11-12 ft bgs. Metals cobalt, arsenic, antimony, and silver detected in soil and/or groundwater exceeding Part 201 Criteria delineated to the north, and appear to merge with impacts to the south and west (Areas 5-5 and 5-6). **II. Characterization** **Scope:** Seven additional step-out soil borings were completed to 30 ft bgs to delineate TCE in soil. Soil samples were collected at approximate 5 ft to 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** TCE detected in soil exceeding Part 201 Criteria, delineated vertically and horizontally. **III. Delineation** **Scope:** Two additional step-out soil borings were completed off-Site to 30 ft bgs to delineate vinyl chloride in groundwater. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). Two monitoring wells installed north and east of Area to provide permanent monitoring locations for groundwater impacts. **Results:** Vinyl chloride in perched groundwater delineated horizontally. Vinyl chloride below Part 201 Criteria and lead above Part 201 Criteria present in bedrock monitoring well at property boundary. Manganese detected above the health-based DWC in 1 groundwater sample.	**Bedrock Well Replacement** **Scope:** Lead encountered in groundwater at historic bedrock well MW-04-06 historically exceeded Part 201 DW Criteria; however, the well was damaged and had been removed from routine monitoring. The original MW-04-06 was replaced by a new bedrock well [MW-04-06(R)] at the same approximate location with a total depth of 99.5 ft bgs, and routine monitoring was reinstated. **Results:** Total and dissolved arsenic and manganese were detected in groundwater above Part 201 Criteria. Other metals were detected but did not exceed Part 201 Criteria.	X	X		X	X			X	SOIL: VOCs > DWP, GSIP, SVIIC, & VSIC Metals > DWP & GSIP GW: VOCs > DW, GSI & $GW_{VI\text{-}nr}$ SVOCs > GSI 1,4-dioxane > Proposed DW (8.5 µg/L) Metals > DW & GSI NOTES: TCE in soil up to 12,000 µg/Kg (>DWP/GSIP/SVIIC/VSIC) delineated. TCE does not exceed the VSIC for a 1/2-acre source area. Therefore, not likely a concern for ambient air inhalation. Only COC detected in Plant 6 storm sewer samples above GSI criteria was selenium, which was not detected in gw above GSI criteria in Area 5-7. Manganese in groundwater is likely due to naturally occurring background concentrations. Propose to replace damaged/destroyed bedrock wells MW-04-06 and MW-04-04(6) to determine if metals are present in deep groundwater above DW criteria.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for VI or additional data to show not a concern.
AREA 5	5-8	AOI 6-49 AOI 6-81	Former Paint Shop Area	**Phase 1 Scope:** Three soil borings were advanced to an average 10 ft bgs, with samples collected at highest PID interval and deepest interval. Groundwater samples were collected from saturated permeable zones (if encountered). **Results:** Low-level VOCs detected in groundwater below Part 201 Criteria. Metals lead and arsenic detected in groundwater exceeding Part 201 Criteria. No VOCs, SVOCs, or metals exceedances detected in soil.	**I. Assessment** **Scope:** Based on Phase 1 results, two HPT/VAP borings were completed to bedrock (or refusal) to characterize the stratigraphy and define groundwater impacts vertically. Soil samples were collected at approximate 15 ft intervals. **Results:** 1,4-Dioxane detected in groundwater exceeding proposed 8.5 µg/L DWC defined vertically. **II. Characterization** **Scope:** Two additional step-out soil borings were completed to 20 ft bgs north and east of the Area to delineate VOCs and metals in soil and groundwater. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** Metals in soil and groundwater delineated vertically and horizontally. **III. Delineation** **Scope:** Two monitoring wells installed north and east of Area adjacent to Characterization stage soil borings to provide permanent monitoring points for groundwater impacts. **Results:** Sampling of the two permanent monitoring wells indicates no exceedances of Part 201 Criteria. 1,4-Dioxane delineated at property boundary.	**Utility Corridor Assessment** **Scope:** To address potential contaminant migration concerns through the utility corridor, two soil borings were advancedto 10 ft bgs north of the area and in the southeast corner of the area, in the vicinity of storm sewer lines. **Results:** Both borings were dry. **Off-Site Metals Assessment** **Scope:** To define metals in groundwater east of Plant 6, one shallow monitoring well (MW-13-36R) was installed to a depth of 10.5 ft bgs. **Results:** Vanadium in groundwater was detected exceeding Part 201 DW Criteria			X	X	X			X	SOIL: Metals > GSIP & PSIC GW: 1,4-dioxane > Proposed DW (8.5 µg/L) Metals > DW & GSI NOTES: 1,4-dioxane in groundwater delineated. Only COC detected in Plant 6 storm sewer samples above GSI criteria was selenium, which was not detected in gw above GSI criteria in Area 5-8. Manganese (historical sample) does not exceed PSIC for a 5-acre source area, not likely a concern for this pathway. Additional groundwater sampling will be completed at P6-SB-35 to determine if additional work is required to delineate vanadium in GW above DW criteria.	1) Restrict potable use of groundwater on-site. 2) Off-site groundwater use restriction

Appendix A
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RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Investigation Area	Subarea	Associated AOI	AOI Summary	RFI Phase 1 Investigation	RFI Phase 2 Investigation Sequence/Results	RFI Phase 2 Supplemental Investigation Sequence/Results	Constituents of Concern > PART 201 RBSLs								Summary of Exceedances	Potential Corrective Measures
							VOCs				SVOCs	PCBs	Metals			
							CVOCs	BTEX	1,4-Dioxane	Other VOCs			CrVI	Other		
AREA 6	NA	AOI 6-16/6-33 AOI 6-59 AOI ID 6-36 ID 6-38 ID 6-39 ID 6-75	AOC 1 - Tanks 5 and 6 - Tank 5: 4,000-gallon steel diesel fuel storage tank; Tank 6: 15,000-gallon steel gasoline storage tank 16' bgs; stores purge thinner/diesel fuel; double-walled tank with leak detection system; Installed in the same location as AOI 6-16	**Phase 1 Scope:** Soil boring P6-SB-43 were advanced to 20 ft bgs, with samples collected at highest PID interval and deepest interval. Groundwater samples were collected from two permanent monitoring wells. **Results:** 1,4-Dioxane detected in groundwater exceeding Part 201 Criteria. No VOCs or SVOCs were detected in soil/gw.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to an average 25 ft bgs to assess VOCs and SVOCs in soil and delineate VOCs in groundwater. Soil samples were collected approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). One HPT/VAP boring was completed to bedrock (or refusal) to characterize stratigraphy and define soil and groundwater impacts vertically. VAP soil/gw samples were collected at approximate 10 ft intervals. **Results:** 1,4-Dioxane in groundwater delineated horizontally. VOCs and SVOCs less than Part 201 Criteria.	COCs defined; no additional work completed			X	X					GW: 1,4-dioxane > Prop DW (8.5 µg/L) NOTES: 1,4-dioxane in groundwater delineated.	1) Restrict potable use of groundwater on-site.
AREA 7	NA	AOI 6-17 AOI 6-47	ID 6-17 - AOC 2 - Tanks 1 (SWMU 4) and 3 (SWMU 8) - Tank 1: 7,500-gallon carbon steel virgin thinner storage tank; Tank 3: 12,000-gallon carbon steel virgin thinner storage tank ID 6-47 - Leaking Industrial Waste Line	**Phase 1 Scope:** Three soil borings were advanced to 20 ft bgs, with samples collected at the highest PID interval. Permanent monitoring well P6-MW-01 was installed to 25 ft bgs, with samples collected at surface, highest PID interval, and deepest interval. Groundwater was sampled following installation. Groundwater samples were also collected at seven permanent monitoring wells. **Results:** BTEX detected in groundwater and soil exceeding Part 201 Criteria. VOCs and SVOCs detected in soil and groundwater below Part 201 Criteria. Metals arsenic, vanadium, and lead detected in groundwater exceeding Part 201 Criteria. Metals detected in soil below Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, eight step-out soil borings were completed to an average depth of 20 ft bgs to assess VOCs and metals in soil and groundwater. Soil samples were collected at approximate 5 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). One HPT/VAP boring was completed to bedrock (or refusal) to characterize stratigraphy and define soil and groundwater impacts vertically. Samples were collected at approximate 5 ft to 10 ft intervals. **Results:** BTEX in groundwater delineated vertically and horizontally to the east. BTEX detected in soil exceeding Part 201 Criteria between 5-15 ft bgs, delineated vertically. SVOCs detected in soil exceeding Part 201 Criteria at surface, delineated vertically. SVOCs in groundwater delineated vertically and horizontally. **II. Characterization** **Scope:** Two additional step-out soil borings advanced to 30 ft bgs define BTEX and SVOCs in soil. Soil samples were collected at approximate 5 ft intervals based on field screening results. **Results:** BTEX in soil exceeding Part 201 Criteria delineated to the north. SVOCs detected in soil below Part 201 Criteria delineated to the north and east. High concentrations of BTEX identified on southern property boundary above SVIIC Criteria. **III. Delineation** **Scope:** Four additional step-out soil borings advanced to 30 ft bgs off-Site south of Area to delineate VOCs, SVOCs, and metals in soil and groundwater. Two soil gas samples collected in the vicinity of BTEX SVIIC exceedances. Two monitoring wells were installed south of property boundary to provide permanent monitoring points for delineation of metals. **Results:** BTEX and SVOCs in soil and groundwater delineated vertically and horizontally. Metals detected in soil exceeding Part 201 Criteria delineated vertically and horizontally. Vanadium, lead and arsenic detected in groundwater above Part 201 Criteria south of Plant 6. Soil gas results did not indicate exceedance of risk-based soil gas screening levels.	**Utility Corridor Assessment** **Scope:** To address potential contaminant migration concerns through the utility corridor, one soil boring wasadvanced to 10 ft bgs in the vicinity of storm sewer lines west of the area. **Results:** VOCs, SVOCs, and metals were not encountered above Part 201 Criteria. **Plant 6 Off-Site Metals Assessment** **Scope:** To define metals in groundwater south of Plant 6, one shallow monitoring well (MW-13-35) was installed to a depth of 30 ft bgs. **Results:** Vanadium in groundwater was detected exceeding Part 201 DW Criteria.		X		X	X			X	SOIL: VOCs > DWP, GSIP, SVIIC, DC, GCP & Csat SVOCs > GSIP & DC Metals > GSIP GW: VOCs > DW & GSI SVOCs > DW Metals > DW & GSI NOTES: Total Xylenes in Soil up to 472,000 µg/Kg (>DWP/GSIP/SVIIC/DC/Csat) delineated. Concentrations of Xylenes do not exceed the risk-based SVIIC, GCP, or DC criteria. Metals in groundwater encountered off-site above DW criteria. Soil gas results below draft MDEQ soil gas screening levels. Manganese in groundwater is likely due to naturally occurring background concentrations. Does not exceed off-site. Proposing additional sampling south of Area 7 to define the extent of metals above criteria in	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for VI or additional data to show not a concern. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover). 4) Off-site groundwater use restriction
AREA 8	NA	AOI 2-7 AOI ID 2-37 AOI ID 2-38	ID 2-7 - Paint Shop Sumps and Trenches - Three sumps are 3'x3'x3' each ID 2-37 - Press Pits. Concrete press pits. One sump associated with presses. ID 2-38 - Scrap Steel Operations Pits. Scrap Steel Pits, 8' Deep. Scrap Pit oily waste sump	**Phase 1 Scope:** Four soil borings were advanced to an average 20 ft bgs, with samples collected at the highest PID interval and the deepest interval. Permanent monitoring well P2-MW-01 was installed and sampled at surface, highest PID interval, and EOB. Groundwater samples were collected following installation. **Results:** Low-level VOCs encountered in soils between 2-5 ft bgs (<Part 201 Criteria). SVOCs detected in soil exceeding Part 201 Criteria at one location at 3-4 ft bgs. No VOCs or SVOCs encountered in groundwater Metals barium and manganese encountered in groundwater above Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, nine step-out soil borings were completed to an average depth of 15 ft bgs to assess VOCs and SVOCs in soil. Soil samples were collected at approximate 5 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones. **Results:** VOCs in soil and GW and SVOCs in GW do not exceed Part 201 Criteria. SVOCs in soil above Part 201 Criteria defined vertically and horizontally. Metals in soil and groundwater exceeding Part 201 Criteria defined vertically and to the north, and appear to merge with impacts from Area 5-2 to the south.	COCs defined; no additional work completed					X			X	SOIL: SVOCs > DWP & GSIP Metals > DWP & GSIP GW: SVOCs > GSI Metals > DW & GSI NOTES: COCs not detected in Plant 2 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site.
AREA 9	NA	AOI 6-60 Misc data gap	Paint Mix Room	**Phase 1 Scope:** Five soil borings were advanced to an average 20 ft bgs, with samples collected at highest PID interval and deepest interval. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** VOCs in soil and groundwater exceeding Part 201 Criteria encountered generally between 4-12 ft bgs. SVOCs encountered in soil below Part 201 Criteria at 1-2 ft bgs.	**I. Assessment** **Scope:** Based on Phase 1 results, 11 step-out soil borings were completed to an average 20 ft to 30 ft bgs to assess VOCs in soil and groundwater. Soil samples were collected at approximate 5 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). One HPT/VAP boring was completed to bedrock (or refusal) to characterize stratigraphy and define soil impacts vertically. VAP boring soil/gw samples were collected at 5 ft intervals. **Results:** VOCs in groundwater exceeding Part 201 Criteria defined vertically. VOCs detected in soil exceeding Part 201 Criteria defined vertically and horizontally to the south and east. SVOCs detected in soil exceeding Part 201 Criteria defined vertically and horizontally to the east. **II. Characterization** **Scope:** One additional step-out soil boring was completed to 30 ft bgs north of Assessment stage borings to delineate VOCs and SVOCs in soil and groundwater. Soil samples were collected at approximate 5 ft intervals based on field screening results. One additional HPT/VAP boring was completed to bedrock (or refusal) to the east of the Area to delineate VOCs in groundwater. VAP groundwater samples collected at 10 ft intervals or where saturated permeable zones were encountered. **Results:** VOCs and SVOCs in soil defined vertically. VOCs not defined to north and west of area before railroad ROW, but are defined by adjacent areas interior to the Site. 1,4-Dioxane encountered in groundwater east of Area exceeding proposed 8.5 ug/L DWC.	COCs defined; no additional work completed	X	X	X	X	X			X	SOIL: VOCs > DWP, GSIP, SVIIC, GCP, DC & Csat SVOCs > DWP, GSIP, VSIC, & DC GW: VOCs > DW, GSI, $GW_{VI\text{-}nr}$ & FESL SVOCs > GSI Metals > DW & GSI NOTES: BTEX in groundwater up to 181,000 µg/L. Xylenes exceed the FESL in groundwater. BTEX in soil up to 651,000 µg/Kg delineated. Concentrations of ethylbenzene and xylenes do not exceed the risk-based SVIIC, GCP, or DC criteria.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for soil DC (PAHs). 3) Require exposure barrier for VI or data indicating that VI is not a concern. 4) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).

Appendix A
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RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Investigation Area	Subarea	Associated AOI	AOI Summary	RFI Phase 1 Investigation	RFI Phase 2 Investigation Sequence/Results	RFI Phase 2 Supplemental Investigation Sequence/Results	Constituents of Concern > PART 201 RBSLs								Summary of Exceedances	Potential Corrective Measures
							VOCs				SVOCs	PCBs	Metals			
							CVOCs	BTEX	1,4-Dioxane	Other VOCs			CrVI	Other		
AREA 10	NA	AOI 6-19 AOI 6-63 AOI 6-82	ID 6-48 - Former Coal Pile ID 6-82 - Former Coal Chute Building. Basement filled with water at the time of the site walkthrough ID 6-19 - Process Waste Tunnel. Runs underneath Buildings 28 and 21; exits Site to the west and continues to GM Lansing Plant 2	**Phase 1 Scope:** Three soil borings were advanced to an average depth of 20 ft bgs, with samples collected at highest PID interval and deepest interval. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** SVOCs, VOCs and Metals detected in soil <Part 201 Criteria. Groundwater < Part 201 Criteria	**I. Assessment** **Scope:** Based on Phase 1 results, five step-out soil borings were completed to an average 20 ft bgs to assess VOCs, SVOCs and metals in soil. Soil samples were collected at approximate 10 ft intervals based on field screening results. One HPT/VAP boring was completed to bedrock (or refusal) to characterize stratigraphy and assist with site-wide groundwater delineation. VAP samples were collected where saturated permeable zones were encountered. **Results:** VOCs not encountered in groundwater. Manganese detected in groundwater exceeding aesthetic DWC but not health-based DWC. VOCs and SVOCs detected in soil below non-residential Part 201 Criteria (but above residential DC Criteria for benzo(a)pyrene). **II. Characterization** **Scope:** Three additional step-out soil borings were completed to 30 ft bgs to define SVOCs in soil. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** SVOCs in soil defined vertically and horizontally..	COCs defined; no additional work completed							X	SOIL: Metals > GSIP & PSIC NOTES: Only COC detected in Plant 6 storm sewer samples above GSI criteria was selenium, which was not detected in gw above GSI criteria in Area 10. Manganese (historical sample) exceeded the PSIC for a 100-acre source, but not a 5-acre source. Therefore, likely not a concern for the Site.	1) Restrict potable use of groundwater on-site.
AREA 11	NA	AOI ID 3-54	Sump - Sump pit with sump pump, unknown use	**Phase 1 Scope:** Three soil borings were advanced to an average depth of 20 ft bgs, with samples collected at highest PID interval and deepest interval. **Results:** VOCs, SVOCs, and metals detected in soil below Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, eight step-out soil borings were completed to an average 15 ft bgs to assess impacts in soil. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). One HPT/VAP boring was completed to bedrock (or refusal) to characterize stratigraphy and define impacts in soil/gw vertically. VAP soil/gw samples were collected at 10 ft intervals. **Results:** VOCs and SVOCs detected in soil exceeding Part 201 Criteria. 1,4-Dioxane and other VOCs detected in groundwater exceeding Part 201 Criteria. SVOCs detected in groundwater below Part 201 Criteria. **II. Characterization** **Scope:** Ten additional step-out soil borings completed to an average 30 ft bgs to define VOCs in soil and groundwater. Soil samples were collected at approximate 5 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** VOCs, SVOCs in soil and groundwater defined horizontally. VOCs detected in soil exceeding Part 201 Criteria appear to terminate at "coliseum" foundation wall to the north, or otherwise merge with Area 21. Deep groundwater samples not collected at VAP boring due to low-permeability saturated formation. **III. Delineation** **Scope:** Monitoring well MW-12-21 installed to provide a permanent monitoring point for delineation of groundwater impacts. **Results:** 1,4-dioxane detected at MW-12-21 in deep overburden above Part 201 Criteria. Follow-up work required for deep overburden characterization.	COCs defined; no additional work completed	X	X	X						SOIL: VOCs > DWP, GSIP, & SVIIC SVOCs > GSIP Metals > DWP & GSIP GW: VOCs > DW & GSI 1,4-dioxane > Proposed DW (8.5 µg/L) & DW Metals > DW NOTES: 1,4-dioxane up to 460 µg/L (>Proposed DW/DW) encountered at 75 ft bgs near Coliseum. Additional sampling will be conducted to determine the extent of 1,4-dioxane in deep overburden. COCs not detected in Plant 3 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for VI or data showing conditions acceptable for VI.
AREA 12	NA	MW-04-02 (TD=132.7') MW-04-03 (TD=88.25')	Vinyl chloride detected above DW Criteria in deep overburden and bedrock	**Phase 1 Scope:** Permanent monitoring wells MW-04-02(3) and MW-04-03(3) were sampled. **Results:** Vinyl chloride detected in groundwater exceeding Part 201 Criteria.	**II. Characterization** **Scope:** One step-out soil boring was completed to 20 ft bgs to characterize metals between property boundary and neighboring Area to the east (Area 14). Soil samples were collected at approximate 10 ft intervals based on field screening results. **Results:** Metals in soil samples < Part 201 Criteria. Vinyl Chloride and other VOCs in bedrock on northwestern portion of Plant 3 believed to originate from off-site source.	**Utility Corridor Assessment** **Scope:** To address potential contaminant migration concerns through the utility corridor, two soil borings were advanced to 20 ft bgs in the vicinity of storm sewer lines. **Results:** Boring was dry. **Historic Arsenic Resampling** **Scope:** Based on historic arsenic concentrations in soil esceeding Part 201 Criteria, one soil boring was advanced to 25 ft bgs in the vicinity of the historic exceedance. **Results:** Arsenic was not detected exceeding Part 201 Criteria.	X								GW: VOCs > DW	1) Restrict potable use of groundwater on-site.
AREA 13	NA	Background Sample	PCBs detected at P3-SB-3 @ 15'-16'	**Phase 1 Scope:** Soil boring P3-SB-03 was advanced to 30 ft bgs and sampled at 10 ft intervals. **Results:** No VOCs or SVOCs detected. PCBs detected in soil at 15-16 ft bgs.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to 20 ft bgs to assess PCBs in soil. Soil samples were collected at approximate 10 ft intervals. **Results:** PCBs defined in soil.	COCs defined; no additional work completed									NOTES: No constituents exceed RBSLs	1) Restrict potable use of groundwater on-site.
AREA 14	NA	AOI 3-10 Misc. Data Gap Borings	AOC 4 - Former Electroplating Area - (1) Electroplating operations (2) New and Reworked Storage Tanks, Chromic Acid Reclaim, 7' diameter by 9' tall (3) 17 Acid Copper Plating Tanks (4) Sludge Sump Under Nickel Storage Tank, 1,350 Gallons (5) 3 Washwater Tanks (1,900-gallons each) in Plating Area (6) Nickel Plating Tanks 1, 2, 3, 4, 6, 7, 8, and 9 (7) Copper Buffing Wash and Rinse Tanks (8) Bumper Plating Sumps (9) Dur'ni Nickel Operations Area, Tanks, Sumps, and Drain Deck	**Phase 1 Scope:** Six soil borings were advanced to an average 25 ft bgs and sampled at highest PID interval and deepest interval. Two permanent monitoring wells were sampled. **Results:** VOCs not detected in soil/gw. SVOCs detected in soil below Part 201 Criteria. SVOCs not detected in groundwater. Metals in soil below Part 201 Criteria. Metals boron, arsenic, and hexavalent chromium detected in perched groundwater exceeding Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase I results, 14 step-out soil borings were completed to an average 15 ft bgs to assess extent of metals in soil and perched water Soil samples were collected at approximate 5 ft intervals. Groundwater samples were collected from saturated permeable zones (if encountered). Three VAP borings were completed in Area to bedrock (or refusal) to characterize stratigraphy and define metal impacts in soil and groundwater. VAP soil/gw samples were collected at 5 ft intervals. **Results:** Hexavalent chromium defined vertically and horizontally in perched zone and appears limited in extent. Additional metals detected in soil and groundwater exceeding Part 201 Criteria defined vertically and horizontally, appearing to merge with impacts from Areas to the east (Areas 17 and 18).	**Historic Arsenic Resampling** **Scope:** Based on historic arsenic concentrations in soil exceeding Part 201 Criteria, one soil boring was advanced to 25 ft bgs west of the area, in the vicinity of the historic exceedance. **Results:** Arsenic was not detected exceeding Part 201 Criteria. **Vinyl Chloride Source Assessment** **Scope:** To verify whether vinyl chloride source mass is located on-Site, two bedrock well (MW-13-37 and MW-13-38) were installed in the central and northeastern portions of the area, and two deep overburden wells (MW-13-40 and MW-13-41) were installed north and east of the area. **Results:** Vinyl chloride was not detected in any of the wells. 1.4-dioxane was encountered in MW-13-41, but is delineated by surrounding wells.							X	X	SOIL: Metals > DWP, GSIP, DC & PSIC GW: Metals > DW & GSI NOTES: COCs not detected in Plant 3 storm sewer samples above GSI criteria. Arsenic exceeds the DC in the northern portion of Area 14 at a depth of 43.5-45 feet bgs. Due to the depth of the exceedance, exposure is not likely. Nickel and total chromium (as hexavalent chromium) exceeded the PSIC for a 100-acre source area. Exceedances for both were located within a 1/2-acre area. Nickel did not exceed the PSIC for a 1/2-acre. Total chromium did; however, all but one location is under quality concrete. Additional work will be completed to determine the extent of metals impacts in soil. Additional groundwater samples will be collected from deep overburden wells MW-91-2, MW-02-04 and MW-04-04 with an emphasis on low turbidity sampling to verify the presence of	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for the total chromium PSIC exceedances. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).

Appendix A
RFI Phase 2 Summary Matrix (rev. February 2014)
RACER Trust Plants 2, 3 and 6 - Lansing, Michigan

Investigation Area	Subarea	Associated AOI	AOI Summary	RFI Phase 1 Investigation	RFI Phase 2 Investigation Sequence/Results	RFI Phase 2 Supplemental Investigation Sequence/Results	Constituents of Concern > PART 201 RBSLs								Summary of Exceedances	Potential Corrective Measures
							VOCs				SVOCs	PCBs	Metals			
							CVOCs	BTEX	1,4-Dioxane	Other VOCs			CrVI	Other		
AREA 15	NA	AOI ID 3-15	Oil Sump for Crank Shaft Operations	**Phase 1 Scope:** Soil boring P3-SB-26 was advanced to 20 ft bgs and sampled at highest PID interval and deepest interval. **Results:** VOCs and SVOCs detected in soil below Part 201 Criteria between 6-12 ft bgs.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to 20 ft bgs to assess VOC impacts in soil and groundwater. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** 1,4-Dioxane and SVOCs detected in perched groundwater exceeding Part 201 Criteria. SVOCs and selenium detected in soil exceeding Part 201 Criteria. **II. Characterization** **Scope:** Two additional step-out borings were completed to 20 ft bgs to define VOCs and SVOCs in soil and groundwater to the west and south Soil samples were collected at approximate 10' intervals. Groundwater samples were collected from saturated permeable zones (if encountered). **Results:** SVOCs and selenium in soil delineated. SVOCs and 1,4-dioxane in groundwater water appears localized and delineated by dry zones.	COCs defined; no additional work completed	X		X		X				SOIL: VOCs > DWP & VSIC SVOCs > GSIP Metals > GSIP GW: 1,4-dioxane > Proposed DW (8.5 µg/L) SVOCs > DW Metals > DW & GSI NOTES: Dibromochloropropane exceeds the 100-acre source area VSIC in one location. It does not exceed the 1/2-acre source area VSIC. Therefore, it is not likely to be a concern for the ambient air pathway. COCs not detected in Plant 3 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site.
AREA 16	NA	AOI 3-11	SWMU 14 - Former Scrap Metal Storage Areas	**Phase 1 Scope:** Two soil borings were advanced to 10 ft bgs and sampled at highest PID interval and deepest interval. **Results:** SVOCs detected in soil below Part 201 Criteria at 2-4 ft bgs.	**I. Assessment** **Scope:** Based on Phase 1 results, eight step-out borings were completed to an average 20 ft bgs to assess SVOC impacts in soil. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** SVOCs detected in soil detected exceeding Part 201 Criteria, generally associated with fill material 5-10' below grade. **II. Characterization** **Scope:** Three additional step-out soil borings were completed to 20 ft bgs to define SVOCs in soil. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** SVOCs defined horizontally. Metals lead and mercury detected in soil exceeding Part 201 Criteria not defined to east. Lead in excess of DC Criteria. **III. Delineation** **Scope:** Seven additional step-out soil borings were completed to an average 20 ft bgs to define metals in soil. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater collected from saturated permeable zones (if encountered). **Results:** Arsenic and other metals detected in soil and groundwater exceeding Part 201 Criteria not defined to the south or east.	**Area 16 Soil and Groundwater Metals Investigation** **Scope:** Based on the presence of arsenic and other metals detected in soil and groundwater, two soil borings were advanced to 25 ft bgs to define metals in soil to the east and south of the area. Soil samples were collected at approximate 5 ft intervals. Three shallow monitoring wells were installed in the vicinity of impacted soil borings to evaluate metals in groundwater. **Results:** Lead in soil detected exceeding Part 201 Direct Contact Criteria east of the area at 5 ft bgs. Additional metals detected exceeding Part 201 Criteria east and south of the area from 0-10 ft bgs. Metals in groundwater detected exceeding Part 201 Criteria east near the eastern property boundary, and defined to the south.					X			X	SOIL: SVOCs > DWP, GSIP, & DC Metals > DWP, GSIP, DC, & PSIC GW: Metals > DW & GSI NOTES: COCs not detected in Plant 3 storm sewer samples above GSI criteria. Additional work will be completed between Area 16 and the southeastern Plant 3 property boundary to define the extent of arsenic in groundwater.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for DC (PAHs and Lead) and PSIC (Mn) exceedances. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover). 4) Off-site groundwater use restriction
AREA 17	NA	AOI 3-3 AOI 3-4 AOI 3-9	ID 3-4 - SWMU 18 - Machining Residue Storage Area. 20 cubic yard roll-off box located. ID 3-9 - AOC 2 - Building 301 UST Farm. Six USTs, stored polymer, sulfuric acid, soluble oil, gasoline, hydraulic oil, and APCO cleaner; were removed in 1989.	**Phase 1 Scope:** Five soil borings were advanced to 20 ft bgs, with samples collected at highest PID interval and deepest interval. Groundwater samples collected from saturated permeable zones (if encountered). 12 permanent monitoring wells were also sampled. **Results:** VOCs and SVOCs detected in groundwater below Part 201 Criteria. SVOCs detected in soil below Part 201 Criteria. Selenium detected in soil exceeding Part 201 Criteria at one location between 11-12 ft bgs. NAPL was encountered in one permanent monitoring well.	**I. Assessment** **Scope:** Based on Phase 1 results, eight step-out soil borings were completed to an average 20 ft bgs to assess VOCs and SVOCs in soil and groundwater. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). Thee HPT/VAP borings were completed to an average 75 ft bgs to characterize stratigraphy and define soil impacts vertically. Samples were collected at 5 ft intervals. 22 LIF borings were completed to 30 ft bgs to delineate the NAPL plume. **Results:** VOCs and SVOCs detected in soil exceeding Part 201 Criteria at 16-17 ft bgs to the south of the Area. Copper detected in soil exceeding Part 201 Criteria, defined vertically and horizontally to the east. **II. Characterization** **Scope:** Nine additional step-out soil borings were completed to 30 ft bgs to define VOCs in soil south of Area. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** VOCs and SVOCs detected in soil exceeding Part 201 Criteria defined to the vertically and horizontally. VOCs detected in groundwater exceeding Part 201 Criteria defined vertically and horizontally. **III. Delineation** **Scope:** Three NAPL monitoring wells were installed in the southern area of concern identified by the LIF study in order to provide permanent NAPL monitoring points. One monitoring well was installed east of the NAPL plume to provide a permanent monitoring point for the delineation of groundwater impacts. **Results:** New well was dry upon attempt to sample.	COCs defined; no additional work completed	X	X	X	X	X			X	SOIL: VOCs > DWP, GSIP, & SVIIC SVOCs > GSIP Metals > GSIP GW: VOCs > DW, GSI, & $GW_{VI\text{-}nr}$ 1,4-dioxane > Proposed DW (8.5 µg/L) SVOCs > DW Metals > DW & GSI NOTES: Elevated VOCs associated with LNAPL plume. COCs not detected in Plant 3 storm sewer samples above GSI criteria. Additional soil sampling will be completed east of Area 17 near the Plant 3 property boundary to define the extent of arsenic in soil above the DW criteria.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for VI or data showing conditions acceptable for VI. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 18	NA	AOI 3-2 AOI 3-6	ID 3-2 - SWMU 16 - Oily Waste Treatment System. Treated oily wastewater; Two concrete used oil holding tanks, Two concrete oily sludge tanks. ID 3-6 - SWMU 20 - Former Electroplating Waste Treatment System. Treated electroplating wastes (copper, nickel, and chromium). Included an Acid Wash Tank, Sludge Storage Tank, Waste Acid Storage Tank.	**Phase 1 Scope:** Two soil borings were advanced to 30 ft, with samples collected at highest PID interval and deepest interval. Groundwater samples collected from saturated permeable zones (if encountered). Groundwater samples were also collected from two permanent monitoring wells. **Results:** VOCs detected in soil < Part 201 Criteria. Metals boron and lead detected in groundwater exceeding Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, seven step-out soil borings were completed to 20 ft bgs to assess VOCs in soils. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones (if encountered). One deep VAP boring was completed to bedrock (or refusal) to characterize stratigraphy and define soil impacts vertically. VAP soil/gw samples were collected at 10 ft intervals. **Results:** SVOCs detected in soil exceeding Part 201 Criteria defined horizontally to the south. Metals boron and cobalt detected in soil exceeding Part 201 Criteria defined vertically and horizontally to the south and west. Vanadium detected in groundwater exceeding Part 201 Criteria defined horizontally to the south. **II. Characterization** **Scope:** Three additional soil borings were completed to 30 ft bgs to define soil SVOCs and groundwater metal impacts. Soil samples were collected at approximate 10 ft intervals based on field screening results. Groundwater samples collected from saturated permeable zones. **Results:** SVOCs in soil defined vertically and horizontally. **III. Delineation** **Scope:** One step-out soil boring was completed to 30 ft bgs to define select soil metal impacts. Soil samples were collected at 10 ft intervals. **Results:** Boron in soil defined horizontally.	**Utility Corridor Investigation** **Scope:** To address potential contaminant migration concerns through the utility corridor, two soil borings were advanced to 20 ft bgs in the vicinity of storm sewer lines. **Results:** Both borings were dry. **Historic Arsenic Resampling** **Scope:** Based on historic arsenic concentrations in soil exceeding Part 201 Criteria, one soil boring was advanced to 25 ft bgs east of the area, in the vicinity of the historic exceedance. **Results:** Arsenic was not detected exceeding Part 201 Criteria. **Vinyl Chloride Source Assessment** **Scope:** To verify whether vinyl chloride source mass is located on-Site, one bedrock monitoring well (MW-13-39B) was installed northeast of the area. **Results:** Vinyl chloride was not detected.					X			X	SOIL: SVOCs > DWP, GSIP, & DC Metals > DW & GSI GW: Metals > DW & GSI NOTES: COCs not detected in Plant 3 storm sewer samples above GSI criteria. Additional soil sampling will be completed east of Area 18 near the Plant 3 property boundary to define the extent of arsenic in soil above the DW criteria.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for DC (PAHs) exceedances. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).

Investigation Area	Subarea	Associated AOI	AOI Summary	RFI Phase 1 Investigation	RFI Phase 2 Investigation Sequence/Results	RFI Phase 2 Supplemental Investigation Sequence/Results	Constituents of Concern > PART 201 RBSLs								Summary of Exceedances	Potential Corrective Measures
							VOCs						Metals			
							CVOCs	BTEX	1,4-Dioxane	Other VOCs	SVOCs	PCBs	CrVI	Other		
AREA 19	NA	AOI ID 3-17	Broach Machine Filter Pit - 9' by 20' by 9' pit	**Phase 1 Scope:** Soil boring P3-SB-25 was advanced to 10 ft bgs, with samples collected at highest PID interval and deepest interval. **Results:** Metals arsenic, boron, cobalt, selenium, and vanadium detected in soil exceeding Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to an average 15 ft bgs to define metals impacts in soils. Soil samples were collected at approximate 10 ft intervals. One VAP boring was completed to bedrock (or refusal) to characterize stratigraphy and define metals in soil vertically. VAP soil/gw samples collected at 10 ft intervals. Groundwater samples were collected from saturated permeable zones (if encountered). **Results:** Metals detected in soil exceeding Part 201 Criteria defined vertically and horizontally to the north, east and south. Boron detected in perched water exceeding Part 201 Criteria, defined vertically. **II. Characterization** **Scope:** Two additional step-out soil borings were completed to the south and west to 20 ft bgs to define SVOC and metals impacts in soils. Soil samples were collected at approximate 10 ft intervals. Groundwater samples collected from saturated permeable zones (if encountered). **Results:** SVOCs and metals in soil defined vertically and horizontally. Arsenic and boron in perched water > Part 201 Criteria not defined locally to the south.	COCs defined; no additional work completed					X			X	SOIL: SVOCs > GSIP Metals > DWP, GSIP, & DC GW: Metals > DW & GSI NOTES: COCs not detected in Plant 3 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for DC (As) exceedances. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 20	NA	AOI 3-51	Building 304 and 305 Press Pit Operations	**Phase 1 Scope:** Four soil borings were advanced to an average 20 ft bgs, with samples collected at the highest PID interval and the deepest interval. **Results:** SVOCs detected in soil below Part 201 Criteria. Selenium detected in soil on western side of Area exceeding Part 201 Criteria.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to 20 ft bgs to define/verify SVOC impacts in soils in northern portion of area. Soil samples were collected at approximate 10 ft intervals based on field screening results. One VAP boring was completed to refusal (50 ft bgs) to characterize stratigraphy and define SVOC and metals impacts in soil vertically. VAP boring soil samples were collected at 10 ft intervals. **Results:** SVOCs detected in shallow soil near property boundary exceeding Part 201 Criteria; defined vertically and horizontally to the south. Cobalt detected in soil exceeding Part 201 Criteria defined vertically and horizontally to the south and west. **II. Characterization** **Scope:** Three additional step-out soil borings were completed to 20 ft bgs to define SVOC and metal impacts at the northern edge of the Area. Soil samples were collected at approximate 10 ft intervals based on field screening results. **Results:** SVOCs and metals detected in soil exceeding applicable Part 201 Criteria defined vertically and horizontally.	COCs defined; no additional work completed					X			X	SOIL: SVOCs > GSIP Metals > DWP, GSIP & PSIC NOTES: COCs not detected in Plant 3 storm sewer samples above GSI criteria. Manganese exceedance of PSIC is deep (17-18' bgs) and not likely to be a concern for ambient air unless soil is brought to the surface.	1) Restrict potable use of groundwater on-site. 2) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).
AREA 21	NA	AOI 3-51	Building 304 and 305 Press Pit Operations	**Phase 1 Scope:** Two soil borings were advanced to 15 ft bgs, with samples collected at t he highest PID interval and the deepest interval. **Results:** Metals arsenic, boron, cobalt, selenium, and vanadium detected in soil exceeding Part 201 Criteria at one location.	**I. Assessment** **Scope:** Based on Phase 1 results, four step-out soil borings were completed to 15 ft bgs to assess metals impacts in soil. Soil samples were collected at approximate 10 ft intervals. **Results:** Metals arsenic, boron, cobalt, and selenium detected in soil exceeding Part 201 Criteria between 10-15 ft bgs, defined horizontally to the north, south, and west. **II. Characterization** **Scope:** One additional step-out soil boring was completed to 20 ft bgs to define metals impacts in soil to the east. Soil samples were collected at 10 ft intervals. **Results:** Metals in soil defined vertically and horizontally.	COCs defined; no additional work completed								X	SOIL: Metals > DWP, GSIP, & DC NOTES: COCs not detected in Plant 3 storm sewer samples above GSI criteria.	1) Restrict potable use of groundwater on-site. 2) Require exposure barrier for DC (As) exceedances. 3) Handle excavated soils appropriately (e.g., don't bring to surface and use as surface cover).

Notes:

* - COCs indicate soil and groundwater exceedances detected during the RFI Phase 1 activities or during previous historical soil investigations.

(1) - Target analytes based on analytes detected during the RFI Phase 1 sampling activities and take into consideration the past use of the Area Of Interest, prior sampling density (i.e., assessment vs. characterization) and analytes detected upgradient and/or in surrounding AOIs.

(2) - Sampling step-out grid based on the size of the Investigation Area or AOI and the recommendations provided by the MDEQ Sampling Strategies and Statistical Training Manual (MDEQ RRD 2002); Small Area = $(\sqrt{A}/\pi)/2$, Large Area = $(\sqrt{A}/\pi)/4$ (results rounded to the nearest 5 feet)

(3) - Target media based on Phase 1 and historical results for soil and groundwater. For example, if soil impacts are defined vertically, the Phase 2 initial assessment will focus on horizontal delineation in soil first to determine if there is a viable source of target analytes before investigating groundwater.

(4) - Sample density is based on the amount of data available and the soil/groundwater analytical results for an area collected during the RFI Phase 1. For example, if an area has low-level detections of SVOCs in one or two borings and no indication of groundwater impacts, initial sampling will be completed based on field screening or otherwise at approximately 10-foot intervals ("normal") throughout the vadose zone. If soil and groundwater data suggest the area may be a source of COCs, soil and groundwater sampling will be completed at nominal 5-foot spacing ("higher resolution").

Colors - general indication of area category as defined in Section 4.1 and indication of the general priority: Green: COCs were identified in soil/gw, but (with the possible exception of metals) at concentrations below the most restrictive MDEQ Part 201 Criteria - low priority.

Yellow: Soil and/or groundwater impacts were identified at a concentration that exceeds applicable Part 201 Criteria - medium priority. Red: Soil and groundwater sampling, often combined with historical data, has identified a source of COCs that are likely contributing to groundwater impacts beneath the Site - high priority

Abbreviations -

VOC - volatile organic compounds
SVOCs - semi-volatile organic compounds
PCBs - polychlorinated biphenyls
RBSLs - MDEQ Risk-Based Screening Levels
DCC - Direct Contact Criteria
DWC - Residential Drinking Water Criteria
GC - Groundwater Contact Criteria
GSI - Groundwater-Surface Water Interface Criteria
DWP - Residential Drinking Water Protection Criteria
GSIP - Groundwater-Surface Water Interface Protection Criteria
GW_{Vinv} - draft Groundwater Concentrations for Vapor Intrusion
PSIC - Particulate Soil Inhalation Criteria
SVIIC - Soil Volatilization to Indoor Air Inhalation Criteria
VSIC - Volatile Soil Inhalation Criteria
BTEX - benzene, toluene, ethylbenzene, xylenes
Cr - chromium
CrVI - hexavalent chromium
NFA - no further action
GW - groundwater
PID - photoionization detector
HPT - Hydraulic Profiling Tool
LIF - laser induced fluorescence
VAP - Vertical Aquifer Profile Sample
VI - vapor intrusion

Appendix B

Soil Boring Logs (disc)

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
MONITOR WELL ABANDONMENT RECORD

PROJECT		**LOCATION**	
Site Name:	RACER Trust Lansing Plant 6 401 N. Verlinden St. Lansing, MI 48915	County:	Ingham
Project Number:	B0064481.2013.00603	¼, ¼, ¼:	
MERA #:		Section:	
MW #:	**MW-04-04**	Town:	Lansing
MIRIS well ID #:	NA	Range:	
GPS Coord :			

DATES			
Date Installed:	10/12/2004	Installed by:	BBL (EDAC Inc)
Date Abandon:	7/23/2013	Abandoned by:	ARCADIS (Stock Drilling)

WELL SPECIFICATIONS			**GROUTING INFORMATION**		
Well Depth:	108	feet bgs.	**2" annulus grouted:**		**4" annulus grouted:**
Screen Depth:	98-108	feet below TOC	Yes	X	
Water Table:		feet below TOC	No		
Casing Type:			from (ft.)	0	
Galvanized:			to (ft.)	108	
PVC:	Yes		grout type:	Portland Cement ≥15 lbs/gal	
Stainless Steel:			**Casing**		
Casing I.D.:	2"		Pulled:		
Screen Type:			Cut off:	X	
PVC:	Yes		depth bgs (ft.):	15	
Stainless Steel:			Hole grouted?	Yes	
Length (ft.):	10'		Grout Type:	Portland Cement ≥15 lbs/gal	

ABANDONMENT METHOD	
Thru casing ?	
Tremie Pipe ?	90' of tremie used to grout entire casing before over drilling.
Other? (explain):	Well was grouted and then over-drilled. 8" hole from augers was then grouted.

ABANDON CREW		**STATE EMPLOYEE WITNESS**	
name: (ARCADIS)	Christine Snyder	Name:	
name: (STOCK Drilling)	Austin Goldsmith	Name:	

COMMENTS
Well abandoned due to obstruction at 45 feet below TOC. Well abandonment permit obtained through Ingham County Health Department. Application no. 7-5-13-165.

Date Start: 7/15/2013
Date Finish: 7/18/2013
Drilling Company: Cascade
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATU Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-04R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				NA			(0.0'-1.0') CONCRETE.		
	1	0.0-7.0	4.0	0.1 0.3 0.4 0.5 0.5			(1.0'-6.0') SAND, fine to medium; well sorted; dry; yellowish brown (10YR 5/4). NOTE: Fill. NOTE: Wet at 2.0' bgs.	▼	
5 / -5				0.1			(6.0'-7.0') SILT, little clay, high plasticity, rapid dilatancy; very fine sand; trace granules to small pebbles, subrounded to subangualr; wet; very soft; brown (10YR 5/3).		
	2	7.0-18.0	11.0	0.2 0.2 0.2 0.4			(7.0'-11.0') SILT and CLAY, high plasticity, slow to rapid dilatancy; little fine to medium sand; trace granules to small pebbles; wet; brown (10YR 5/3) with gray (10YR 5/1) mottling. NOTE: Till. NOTE: 1" thick sand seam, medium to very coarse; wet at 10.0' bgs.		
10 / -10				0.2 0.2 0.2 0.4			(11.0'-19.0') SILT, some clay, medium plasticity, slow dilatancy; little very fine to medium sand; trace granules to large pebbles, subrounded to subangular; soft; wet; grayish brown (10YR 5/2) with yellowish brown (10YR 5/4) mottling. NOTE: Medium stiff at 13.0' bgs.		
15 / -15				0.2 0.4 0.4			NOTE: Rapid dilatancy; color change to gray (10YR 5/1) at 15.0' bgs.		

ARCADIS
Infrastructure · Water · Environment · Buildings

Remarks: bgs = below ground surface
Groundwater encountered at 2.0', from 6.0'-19.0', 31.0'-33.0' and at 40.0' bgs.
No staining or odor observed.

Date Start: 7/15/2013
Date Finish: 7/18/2013
Drilling Company: Cascade
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATU Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-04R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.5					
				0.2					
				0.6			(19.0'-26.0') CLAY, some silt, medium plasticity, slow dilatancy; little very fine sand; trace granules to large pebbles; subrounded; medium stiff; moist; gray (10YR 5/1).		
20 -20	3	18.0-28.0	10.0	0.5					
				0.3					
				0.6					
				0.9					
25 -25				0.5					
				0.5			(26.0'-31.0') SILT and CLAY, high plasticity, slow dilatancy; little very fine to fine sand; trace granules to large pebbles, subrounded; soft; moist; gray (10YR 5/1). NOTE: 1" sand seam, fine to medium; dry; yellowish brown (10YR 5/6) at 27.0' bgs. NOTE: Till.		
				0.2					
				0.8					
				0.2					
				0.2					
30 -30	4	28.0-38.0	10.0	0.2					
				0.2			(31.0'-33.0') SILT, nonplastic, rapid dilatancy; very soft; wet; gray (10YR 5/2).		
				0.0					
				0.2			(33.0'-34.0') SAND, very fine to medium; trace granules to small pebbles, subrounded to subangular; trace silt; poorly sorted; moist; grayish brown (10YR 5/2).		
				0.1			(34.0'-41.0') SILT, some clay, medium plasticity, slow dilatancy; trace fine to medium sand, trace granules to medium pebbles, subrounded; medium stiff; moist; gray (10YR 5/1).		
35 -35				0.2					
				0.0			NOTE: Small cobble, subangular to subrounded at 36.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered at 2.0', from 6.0'-19.0', 31.0'-33.0' and at 40.0' bgs.
No staining or odor observed.

Date Start: 7/15/2013
Date Finish: 7/18/2013
Drilling Company: Cascade
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATU Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-04R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.2					
				0.2					
				0.2					
40 -40	5	38.0-48.0	10.0	0.4			NOTE: Slow dilatancy; wet at 40.0' bgs.		
				0.5			(41.0'-47.0') CLAY and SILT, low plasticity, slow dilatancy; little very fine sand; medium stiff; moist; gray (10YR 5/1).		0.0-82.0' bgs. (Neat Cement)
				0.4			NOTE: Little granules to small pebbles, subangular from 43.0-44.0' bgs.		0.0-82.0' bgs. (Stainless Steel 4.0" Well Casing)
				0.2					
45 -45				0.3					
				0.2					
				0.9					
				2.0			(47.0'-48.0') SAND, fine to coarse; little medium to very large pebbles, subrounded; little very coarse sand to granules, subrounded to subangular; poorly sorted; moist; grayish brown (10YR 5/2).		
				1.8			(48.0'-62.5') SAND, medium to coarse, little fine sand; little granules to medium pebbles, subangular to subrounded; poorly sorted; dry; grayish brown (10YR 5/2). NOTE: Some small to large pebbles, subrounded.		
50 -50	6	48.0-58.0	8.5	1.5					
				1.5					
				1.4					
				1.5					
				0.7					
55 -55				1.5					
				1.4					

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Remarks: bgs = below ground surface
Groundwater encountered at 2.0', from 6.0'-19.0', 31.0'-33.0' and at 40.0' bgs.
No staining or odor observed.

Date Start: 7/15/2013
Date Finish: 7/18/2013
Drilling Company: Cascade
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATU Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-04R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				1.0					
60 -60	7	58.0-65.5	7.5	1.4 1.2 1.4 NA NA NA NA			(62.5'-65.5') SANDSTONE, weathered; pulverized by Sonic.		
65 -65	8	65.5-70.0	4.5	NA NA NA NA NA			(65.5'-110.0') Saginaw Formation; very fine to fine; soft; black laminations. NOTE: Used Sonic.		
70 -70	9	70.0-82.0	12.0	NA NA NA NA NA NA NA					
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered at 2.0', from 6.0'-19.0', 31.0'-33.0' and at 40.0' bgs.
No staining or odor observed.

Date Start: 7/15/2013
Date Finish: 7/18/2013
Drilling Company: Cascade
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATU Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-04R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80				NA					
				NA					
				NA					
				NA					
				NA					
				NA			NOTE: 9 natural fractures from 82.0-90.0' bgs.		
				NA					
	10	82.0-90.0	8.0	NA					
85 -85				NA					
				NA			NOTE: Shale inclusions from 86.1-86.3' bgs.		
				NA					
				NA					
				NA					
				NA					
90 -90				NA			NOTE: 9 natural fractures with mineral deposition from 90.0-100.0' bgs.		
				NA					
	11	90.0-100.0	10.0	NA					
				NA					
				NA					
95 -95				NA					
				NA					
				NA					82.0-110.0' bgs. (Open Borehole)

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Remarks: bgs = below ground surface
Groundwater encountered at 2.0', from 6.0'-19.0', 31.0'-33.0' and at 40.0' bgs.
No staining or odor observed.

Date Start: 7/15/2013
Date Finish: 7/18/2013
Drilling Company: Cascade
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATU Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-04R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				NA					
				NA					
				NA					
100 / 100									
				NA					
				NA					
	12	100.0-110.0	10.0	NA					
				NA					
				NA					
				NA					
105 / 105							NOTE: Shale inclusions; very soft; dark gray (10YR 4/1); cause natural fractures from 105.0-110.0' bgs.		
				NA					
				NA					
				NA					
				NA					
				NA					
110 / 110							End of boring at 110.0' bgs.		
115 / 115									

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Remarks: bgs = below ground surface
Groundwater encountered at 2.0', from 6.0'-19.0', 31.0'-33.0' and at 40.0' bgs.
No staining or odor observed.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
MONITOR WELL ABANDONMENT RECORD

PROJECT		**LOCATION**	
Site Name:	RACER Trust Lansing Plant 6 401 N. Verlinden St. Lansing, MI 48915	County:	Ingham
Project Number:	B0064481.2013.00603	¼, ¼, ¼:	
MERA #:		Section:	
MW #:	**MW-04-06**	Town:	Lansing
MIRIS well ID #:	NA	Range:	
GPS Coord :			

DATES			
Date Installed:	10/11/2004	Installed by:	BBL (EDAC Inc)
Date Abandon:	7/22/2013	Abandoned by:	ARCADIS (Stock Drilling)

WELL SPECIFICATIONS			**GROUTING INFORMATION**		
Well Depth:	98	feet bgs.	**2" annulus grouted:**		**4" annulus grouted:**
Screen Depth:	88-98	feet below TOC	Yes	X	
Water Table:		feet below TOC	No		
Casing Type:			from (ft.)	0	
Galvanized:			to (ft.)	98	
PVC:	Yes		grout type:	Portland Cement ≥15 lbs/gal	
Stainless Steel:			**Casing**		
Casing I.D.:	2"		Pulled:		
Screen Type:			Cut off:	X	
PVC:	Yes		depth bgs (ft.):	25	
Stainless Steel:			Hole grouted?	Yes	
Length (ft.):	10'		Grout Type:	Portland Cement ≥15 lbs/gal	

ABANDONMENT METHOD	
Thru casing ?	
Tremie Pipe ?	90' of tremie used to grout entire casing before over drilling.
Other? (explain):	Well was grouted and then over-drilled. 8" hole from augers was then grouted.

ABANDON CREW		**STATE EMPLOYEE WITNESS**	
name:	Christine Snyder	Name:	
(ARCADIS)			
name: (STOCK)	Austin Goldsmith	Name:	
name:		Name:	
name:		Name:	

COMMENTS
Well abandoned due to obstruction at 82.6 feet below TOC. Well abandonment permit obtained through Ingham County Health Department. Application no. 7-5-13-164

Date Start: 7/16/2013
Date Finish: 7/19/2013
Drilling Company: Boart Longyear
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATV Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 11.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 99.5' bgs
Surface Elevation:

Descriptions By: C.Snyder

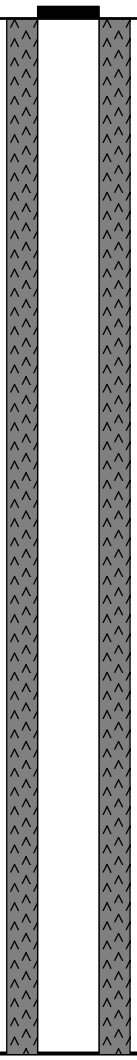
Well/Boring ID: **MW-04-06R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				NA			(0.0'-0.7') ASPHALT.		
				0.6			(0.7'-1.0') CLAY, little silt, low plasticity; trace graules to small pebbles, subrounded to subangular; stiff; dry; dark yellowish brown (10YR 4/6) with gray (10YR 5/1) mottling.		
	1	0.0-5.0	5.0	0.7			(1.0'-2.0') SILT, nonplastic; and SAND, very fine; poorly sorted; dry; grayish brown (10YR 5/2).		
				0.7			(2.0'-8.0') CLAY, little silt, low plasticity; trace graules to small pebbles, subrounded to subangular; stiff; dry; dark yellowish brown (10YR 4/6) with gray (10YR 5/1) mottling.		
				0.8					
5 / -5				0.4					
	2	5.0-8.0	3.0	0.9					
				1.2					
				0.2			(8.0'-11.0') SAND, fine to medium; trace granules to small pebbles, subrounded to subangular; poorly sorted; moist; yellowish brown (10YR 5/4).		
				0.2			NOTE: Interbedded clay seam at 9.0' bgs.		
10 / -10	3	8.0-17.0	17.0	NA			NOTE: Color change to dark yellowish brown at 10.0' bgs.	▼	
				0.2			(11.0'-19.0') SILT, little clay, rapid dilatancy; some very fine sand, trace small to large pebbles, subrounded to subangular; soft; wet; gray (10YR 5/1). NOTE: Till.		
				0.2					
				0.2					
				0.5					
15 / -15				0.4					
				0.3					



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Remarks: bgs = below ground surface
Groundwater encountered from 11.0'-21.0', 23.0'-31.0', at 36.0', from 37.5'-47.5' bgs.
No staining or odor observed.

Date Start: 7/16/2013
Date Finish: 7/19/2013
Drilling Company: Boart Longyear
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATV Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 11.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 99.5' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-06R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			NOTE: Large cobble, subrounded at 17.0' bgs.		
				0.0					
20 -20	4	17.0-23.0	6.0	0.1			(19.0'-21.0') SAND, very fine to medium; trace small to large pebbles, subrounded; little silt; trace clay; poorly sorted wet; dark gray (10YR 4/1).		
				0.0			(21.0'-23.0') CLAY, some silt, medium plasticity, slow dilatancy; trace very fine sand; trace granules to large pebbles, subrounded; soft; wet; gray (10YR 5/1). NOTE: Till.*/NOTE: Large cobbles, subrounded to subangular at 21.5' bgs.		
				0.0					
				0.3					
				0.0			(23.0'-31.0') SILT, trace clay, low plasticity, rapid dilatancy; little very fine sand; trace granules to medium pebbles, subrounded; soft; wet; gray (10YR 5/1).		
25 -25	5	23.0-33.0	10.0	0.0					
				0.0					
				0.0			NOTE: 3" thick silt and pebbles, sunrounded to subangular; rapid dilatancy; wet at 26.5' bgs.		
				0.0					
				0.0					
				0.0					
30 -30				0.0					
				0.0					
				0.0			(31.0'-33.0') CLAY, medium plasticity; some very fine sand; trace granules to small pebbles, subrounded to subangular; medium stiff; moist; gray (10YR 5/1).		
				0.0					
				0.0			(33.0'-34.0') SAND, medium to very coarse; little granules to medium pebbles, subrounded to subangular; trace small to medium cobbles, subrounded to subangular; poorly sorted; dry; dark gray (10YR 4/1).		
				0.0			(34.0'-37.5') SAND; trace small to large pebbles, subrounded subangular; and SILT, trace clay, nonplastic; poorly sorted; stiff; dry; drak gray (10YR 4/1).		
35 -35	6	33.0-37.0	4.0	0.0					
				0.0			NOTE: Rapid dilatancy; wet at 36.0' bgs.		
				0.0					0.0-74.0' bgs.

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Remarks: bgs = below ground surface
Groundwater encountered from 11.0'-21.0', 23.0'-31.0', at 36.0', from 37.5'-47.5' bgs.
No staining or odor observed.

Date Start: 7/16/2013
Date Finish: 7/19/2013
Drilling Company: Boart Longyear
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATV Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 11.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 99.5' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-06R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	7	37.0-39.5	2.5	0.1 NA 0.2			(37.5'-44.5') SILT, little clay, low plasticity, rapid dilatancy; trace granules to small pebbles, subrounded to subangular; wet; gray (10YR 5/1).		(Neat Cement) 0.0-74.0' bgs. (Stainless Steel 4.0" Well Casing)
40 -40	8	39.5-49.5	10.0	0.0 0.0 0.0 0.0 0.0			(44.5'-47.0') SAND, fine to medium; trace granules, subangular; trace small to large pebbles, subrounded to rounded; little silt; poorly sorted; wet; gray (10YR 5/1). NOTE: Silt layer at 45.3' bgs.		
45 -45				0.0 0.0 0.0			(47.0'-47.5') CLAY, some silt, low plasticity; some very fine sand; trace small to medium pebbles, subrounded to subangular; soft; moist; gray (10YR 4/1).		
50 -50	9	49.5-59.5	10.0	0.0 0.0 NA NA NA NA NA NA NA NA NA			(47.5'-60.0') SANDTSONE/BEDROCK, weathered; gray (10YR 3/1); interbedded with silt and very fine sand, dry to moist; drak gray (10YR 4/1).*/NOTE Used sonic rig.		
55 -55									

Remarks: bgs = below ground surface
Groundwater encountered from 11.0'-21.0', 23.0'-31.0', at 36.0', from 37.5'-47.5' bgs.
No staining or odor observed.

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Date Start: 7/16/2013
Date Finish: 7/19/2013
Drilling Company: Boart Longyear
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATV Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 11.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 99.5' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-06R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				NA					
				NA					
60 -60				NA					
				NA			(60.0'-74.0') SANDSTONE, very fine to fine; quartz; trace muscovite; trace orthoclase, sedimentary; soft. NOTE: Sonic.		
				NA					
	10	59.5-67.0	7.0	NA					
				NA					
				NA					
65 -65				NA					
				NA					
				NA					
				NA					
				NA					
70 -70	11	67.0-74.0	7.0	NA					
				NA					
				NA					
				NA					
				NA			(74.0'-99.5') SANDSTONE, fine. soft; gray (10YR 6/1). NOTE: Saginaw Formation. NOTE: Shale and mineral laminations cause many natural fractures from 74.0'-79.5')		
75 -75				NA					
	12	74.0-79.5	4.4	NA			NOTE: Driller felt 8" of void at 75.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered from 11.0'-21.0', 23.0'-31.0', at 36.0', from 37.5'-47.5' bgs.
No staining or odor observed.

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Date Start: 7/16/2013
Date Finish: 7/19/2013
Drilling Company: Boart Longyear
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATV Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 11.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 99.5' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-06R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				NA					
				NA					
80 -80				NA			NOTE: 3 natural fractures from 79.5-89.5' bgs.		
				NA					
				NA					
	13	79.5-89.5	10.0	NA					
				NA					
				NA					
85 -85				NA					
				NA					
				NA					74.0-99.5' bgs. (Open Borehole)
				NA					
				NA					
90 -90				NA					
				NA					
				NA					
	14	89.5-99.5	10.0	NA					
				NA					
				NA					
95 -95				NA					
				NA					
				NA					

Remarks: bgs = below ground surface
Groundwater encountered from 11.0'-21.0', 23.0'-31.0', at 36.0', from 37.5'-47.5' bgs.
No staining or odor observed.

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Date Start: 7/16/2013
Date Finish: 7/19/2013
Drilling Company: Boart Longyear
Driller's Name: Jim, Jimmy, Andy
Drilling Method: Sonic-ATV Fullsize
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.): 11.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 99.5' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **MW-04-06R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				NA NA			NOTE: Natural fractures with black mineral deposits at 97.2' bgs.		
100-100							End of boring at 99.5' bgs.		
105-105									
110-110									
115-115									

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Remarks: bgs = below ground surface
Groundwater encountered from 11.0'-21.0', 23.0'-31.0', at 36.0', from 37.5'-47.5' bgs.
No staining or odor observed.

Date Start/Finish: 3/27/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.80
Easting: 13063749.86
Casing Elevation: 864.37

Borehole Depth: 94.0' bgs
Surface Elevation: 861.50

Descriptions By: C. Barton

Well/Boring ID: **MW-13-22**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
0 / 860	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0 0.0			(0.0-3.0') SAND, fine to medium, trace small to medium pebbles, subangular; little clay; poorly sorted; moist; dark brown (10YR 3/3). Note: Trace roots, fill. Note: Some small to medium pebbles from 2.0-3.0' bgs. (3.0-16.0') CLAY, high plasticity; little granules to small pebbles, subrounded to subangular; little medium sand; moist; medium stiff; dark yellowish brown (10YR 4/4). Note: Fill.
5 / 855	2	5.0-7.0	2.0	0.1 0.3			
	3	7.0-12.0	2.25	NA 0.2 0.4 NA 0.3			Note: Pocket of small to medium pebbles, subrounded; very dark grayish brown (10YR 3/2); soft; at 11.0' bgs. Note: Very soft; moist; from 12.0-15.5' bgs.
10 / 850	4	12.0-17.0	5.0	0.3 0.0 1.3 4.6 10.3			Note: Color change to dark grayish brown (10YR 4/2) at 15.5' bgs. (15.0-17.0') CRUSHED CONCRETE, rebar.
15 / 845							

Well/Boring Construction

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3/27/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.80
Easting: 13063749.86
Casing Elevation: 864.37

Borehole Depth: 94.0' bgs
Surface Elevation: 861.50

Descriptions By: C. Barton

Well/Boring ID: **MW-13-22**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				1.3			(17.0-19.25') CLAY, high plasticity; little granules to small pebbles, subrounded to subangular; little medium sand; moist; soft; dark yellowish brown (10YR 3/2).	
				1.0				
				0.5			(19.25-22.0') PEBBLES, small to very large, subangular; and GRANULES, subangular; little coarse sand, subangular; little clay; poorly sorted; wet; light brownish gray (10YR 6/2).	
20				0.3				
840				0.7				
	5	17.0-27.0	10.0	1.0			(22.0-23.0') CLAY, low plasticity, no dilatancy; little to some granules, angular; little fine sand; dry; hard; yellowish brown (10YR 5/6).	
				0.5			(23.0-27.0') CLAY, medium plasticity, no dilatancy; little fine sand; trace granules to small pebbles, angular; moist; medium stiff; dark grayish brown (10YR 4/2).	
				0.8				
25				0.9				
835				1.1			Note: Small to large pebbles, subrounded at base of clay.	
				0.1			(27.0-29.0') SAND, fine to medium, subrounded to subangular; trace granules to small pebbles, subrounded; well sorted; dry to moist; pale brown (10YR 6/3). Note: Coarsening downwards.	
				0.3				
				1.4			(29.0-34.0') SAND, medium to very coarse, subrounded to subangular; some granules, subrounded to subangular; poorly sorted; dry to moist; pale brown (10YR 6/3). Note: Coarsening downwards, increasing very coarse sand to small pebbles, and decreasing medium to coarse.	
30				0.3				
830				1.1				
	6	27.0-37.0	9.0	1.8				
				1.7			Note: Trace medium to large pebbles, subangular; at 34.0' bgs.	
				0.2			(34.0-39.0') SAND, very fine to fine, trace medium to coarse sand, subrounded; well sorted; dry; pale brown (10YR 6/3).	
35				4.8				
825				0.5				

Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

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Date Start/Finish: 3/27/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.80
Easting: 13063749.86
Casing Elevation: 864.37

Borehole Depth: 94.0' bgs
Surface Elevation: 861.50

Descriptions By: C. Barton

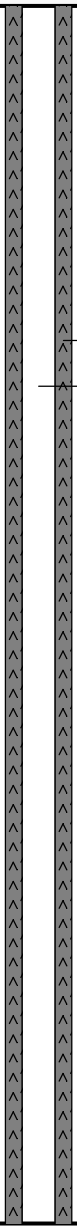
Well/Boring ID: **MW-13-22**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
				4.1			Note: Trace small pebbles, subrounded; moist from 37.0-39.0' bgs.
				2.7			Note: Trace silt from 38.0-39.0' bgs.
40	7	37.0-42.0	5.0	5.8			(39.0-41.0') SAND, very fine, little coarse sand to small pebbles, subangular; some silt; poorly sorted; dry; light gray (10YR 4/1).
				5.9			
820				26.5			(41.0-43.0') SAND, medium to very coarse, subangular; some granules to medium pebbles, subangular; poorly sorted; dry; light gray. Note: Coarsening downwards.
	8	42.0-47.0	5.0	4.0			
				12.0			(43.0-44.0') SILT, low plasticity, slow dilatancy; trace very fine sand; dry; stiff; pale brown (10YR 6/3). Note: Blocky.
45				2.0			(44.0-45.5') SAND, very fine; trace silt; well sorted; dry; light gray (10YR 7/2).
				11.2			(45.5-47.0') SILT, low plasticity, rapid dilatancy; little very fine sand; soft; dry; light gray (10YR 7/2).
815				4.7			
				16.7			(47.0-51.0') SAND, very fine to fine; trace silt; well sorted; dry; light gray (10YR 7/2). Note: Fining downwards.
				11.0			
				9.3			
50				7.3			
810				2.2			(51.0-54.0') SAND, very fine to fine, little coarse to very coarse sand, subangular; trace small pebbles, subangular; poorly sorted; dry; light gray.
	9	47.0-57.0	10.0	1.5			
				11.0			Note: Coarsening downwards, some coarse to very coarse sand from 53.0-54.0' bgs.
				4.4			(54.0-62.0') CLAY, medium to low plasticity, low dilatancy; little fine sand, little small to large pebbles, angular; dry; very stiff; dark grayish brown (10YR 4/2).
55				19.2			Note: Poorly sorted sand; medium; some coarse to very coarse, subangular; little granules to medium pebbles, angular; poorly sorted; dry; from 55.5-56.0' bgs.
805				22.5			

Well/Boring Construction



Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

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Date Start/Finish: 3/27/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.80
Easting: 13063749.86
Casing Elevation: 864.37

Borehole Depth: 94.0' bgs
Surface Elevation: 861.50

Descriptions By: C. Barton

Well/Boring ID: **MW-13-22**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.1			Note: Moist, medium stiff from 57.0-60.0' bgs.	
				0.1				
				0.2				
60								
				0.2			Note: Very stiff to hard; dry; from 60.0-62.0' bgs.	
800				0.0				
	10	57.0-67.0	10.0				(62.0-66.0') SILT, low plasticity to nonplastic, slow dilatancy; little very fine sand; moist; very stiff; grayish brown (10YR 5/2).	
				0.0				
				0.0				
				0.3			Note: Rapid dilatancy from 64.0-64.5' bgs.	
65							Note: And clay, medium plasticity from 64.5-65.0' bgs.	
				0.4			Note: Rapid dilatancy, moist to wet from 65.0-66.0' bgs.	
795				0.9			(66.0-67.0') CLAY, little silt, medium to high plasticity, no dilatancy; dry to moist; stiff to very stiff; gray (10YR 5/1).	
				0.1			(67.0-76.0') SILT, low plasticity, rapid dilatancy; little very fine sand; moist to wet; stiff; gray (10YR 5/1).	
				0.1			Note: moist, slow dilatancy, from 68.0-76.0' bgs.	
				0.1				
70								
				0.0				
790				0.1				
	11	67.0-77.0	10.0					
				0.0				
				0.1				
				1.2			Note: Some very fine sand from 74.0-76.0' bgs.	
75								
				2.5				
785				3.9			(76.0-78.0') CLAY and SILT, medium plasticity, slow dilatancy; moist to dry; stiff to medium stiff; gray (10YR 5/1).	

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Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

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Date Start/Finish: 3/27/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.80
Easting: 13063749.86
Casing Elevation: 864.37

Borehole Depth: 94.0' bgs
Surface Elevation: 861.50

Descriptions By: C. Barton

Well/Boring ID: **MW-13-22**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0				
				0.0			(78.0-82.0') SILT, little clay, low plasticity to nonplastic, rapid dilatancy; moist to wet; stiff; gray (10YR 5/1).	
				0.0			Note: Sand layers (3 inches thick), very fine to fine; well sorted; moist to wet; dark grayish brown (10YR 4/2); at 79.25' bgs and 81.75' bgs.	
80				0.0				
780				0.0				
	12	77.0-87.0	10.0	0.0			(82.0-83.0') CLAY, little silt, high plasticity, low dilatancy; moist; very stiff; grayish brown (10YR 5/2) and reddish gray (5Y 3/2).	
				0.1			(83.0-83.2') SAND, medium to coarse, subangular; trace small pebbles, subangular; little clay; poorly sorted; wet; gray (10YR 5/1).	
				0.2			(83.2-84.0') CLAY, some silt, low plasticity, slow dilatancy; moist; very stiff; dark gray (10YR 4/1) and reddish gray (5YR 5/2).	
85				0.4			(84.0-88.0') CLAY, little silt, medium to high plasticity; dry to moist; very stiff; dark gray and reddish gray.	85.0-87.0' bgs. (Choker Sand Pack)
775				0.2				
				0.1				
				0.0			(88.0-89.0') SAND, very fine; and SILT, nonplastic, no dilatancy; moist to wet; medium stiff; reddish gray.	
				0.0			(89.0-94.0') SAND, very fine to fine; trace to little silt; well sorted; moist; light gray (10YR 7/2). Note: Trace bedrock pieces,small to large, subangular.	
90				0.0				
	13	87.0-94.0	7.0	0.1				87.0-94.0' bgs. (Sand Filter Pack - K&E #1)
770				0.0				89.0-94.0' bgs. (10-Slot Stainless Steel Screen)
				1.0				
				2.0			Note: Bedrock encountered at 94.0' bgs	
							End of boring at 94.0' bgs.	
95								
765								

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3/28/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.34
Easting: 13063975.27
Casing Elevation: 864.31

Borehole Depth: 81.5' bgs
Surface Elevation: 861.45

Descriptions By: C. Barton

Well/Boring ID: **MW-13-23**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0				NA			(0.0-1.0') CONCRETE.	
				0.1			(1.0-5.0') CLAY, high plasticity; and SAND, coarse to very coarse, subangular; some small to large pebbles, angular; medium stiff; moist; brown (10YR 5/3).	
	1	0.0-5.0	5.0	0.1			Note: Little to some sand and pebbles, color change to grayish green at 2.5' bgs.	
				0.0				
5 / -5				0.0				
	2	5.0-7.0	2.0	0.0			(5.0-8.0') CLAY, high plasticity; no dilatancy; little fine sand, little granules to small pebbles, subangular; moist to soft; very dark gray (10YR 3/1). Note: Trace roots.	
				0.4				
				0.2			(8.0-19.5') CLAY, high plasticity, no dilatancy; little medium to very coarse sand, subangular; little small to medium pebbles, subangular; moist; stiff; grayish brown (10YR 5/2)	
10 / -10				0.3				
				0.1				
	3	7.0-17.0	10.0	0.2				
				0.0				
				0.1				
15 / -15				0.0				
				0.0				
				0.0				

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Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
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Date Start/Finish: 3/28/13
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Rig Type: Sonic

Northing: 452839.34
Easting: 13063975.27
Casing Elevation: 864.31

Borehole Depth: 81.5' bgs
Surface Elevation: 861.45

Descriptions By: C. Barton

Well/Boring ID: **MW-13-23**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.2			Note: Dry, very stiff from 18.0-19.5' bgs.	
				0.2				
20 -20				0.7			(19.5-21.0') CLAY, low plasticity; and SAND, medium, subrounded; little small to large pebbles, subangular; dry; dark grayish brown (10YR 4/2).	
				0.9				
	4	17.0-27.0	10.0	0.2			(21.0-27.0') CLAY, high plasticity; little coarse to very coarse sand, subangular; little granules to medium pebbles, subangular; moist; medium stiff; dark grayish brown (10YR 4/2).	
				0.2				
				0.1				
25 -25				0.2				
				0.1				
				0.3			Note: Moist sand seam, fine to medium, yellowish brown (10YR 5/6), at 26.75' bgs.	
				0.1			(27.0-33.0') SAND, very fine to fine; trace silt; well sorted; dry; yellowish brown (10YR 5/4).	
				2.9				
				3.1			Note: Some very coarse sand to small pebbles, subrounded to subangular, from 29.0-29.5' bgs.	
30 -30				11.1			Note: Some silt from 30.5-31.0' bgs.	
							Note: Trace small pebbles from 31.0-33.0' bgs.	
				1.4				0.0-64.6' bgs. (Quik Grout)
	5	27.0-37.0	10.0	3.3				
							(33.0-38.0') SAND, medium to coarse, subrounded; some very coarse to small pebbles, subrounded; poorly sorted; dry; yellowish brown (10YR 5/4).	-2.85-69.0' bgs. (Sch. 40 PVC 2.0" Well Casing)
				5.9				
				2.7				
35 -35				4.9				
				0.1			Note: Little silt, trace large pebbles, subrounded, at 36.5' bgs.	

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3/28/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.34
Easting: 13063975.27
Casing Elevation: 864.31

Borehole Depth: 81.5' bgs
Surface Elevation: 861.45

Descriptions By: C. Barton

Well/Boring ID: **MW-13-23**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				3.6			Note: Little very coarse to small pebbles from 36.0-38.0' bgs.	
				2.6			(38.0-42.0') SAND, fine to medium, subrounded; trace granules, subrounded; well sorted; dry; very pale brown (10YR 7/3).	
40 -40	6	37.0-42.0	5.0	5.1				
				12.7			Note: Very fine to fine sand, some silt, at 41.0' bgs.	
				8.3				
				19.5			(42.0-43.0') SAND, medium to very coarse, subrounded; and GRANULES, subrounded; poorly sorted; dry; pale brown (10YR 6/3).	
				1.6			(43.0-44.75') SAND, medium to coarse, subrounded; some very coarse sand, subrounded; poorly sorted; dry; pale brown (10YR 6/3).	
45 -45	7	42.0-47.0	5.0	2.4				
				2.5			(44.75-45.75') SILT, little clay, low plasticity, slow dilatancy; moist to wet; stiff; yellowish brown (10YR 5/4).	
				2.2			(45.75-48.5') SAND, fine to medium, subrounded; little coarse sand, subrounded; poorly sorted; dry; pale brown.	
				2.7				
				1.8			(48.5-51.5') SAND, fine to medium, trace granules to small pebbles, subrounded; well sorted; moist; yellowish brown.	
50 -50				1.9				
				3.4				
	8	47.0-56.0	9.5	2.2			Note: Little to some granules from 49.0-51.0' bgs.	
				7.3			(51.5-53.0') SAND, very fine to fine; little silt; moist; well sorted; pale brown (10YR 6/3).	
				4.2			(53.0-54.0') SAND, medium to very coarse, subrounded to subangular; and PEBBLES, small to very large, subrounded to subangular; poorly sorted; dry; brown.	
				0.1			(54.0-68.0') SAND, very fine to fine; little silt; well sorted; dry; pale brown (10YR 6/3).	
55 -55				1.4				
				6.4				

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Groundwater encountered at 77.0' bgs.
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Date Start/Finish: 3/28/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.34
Easting: 13063975.27
Casing Elevation: 864.31

Borehole Depth: 81.5' bgs
Surface Elevation: 861.45

Descriptions By: C. Barton

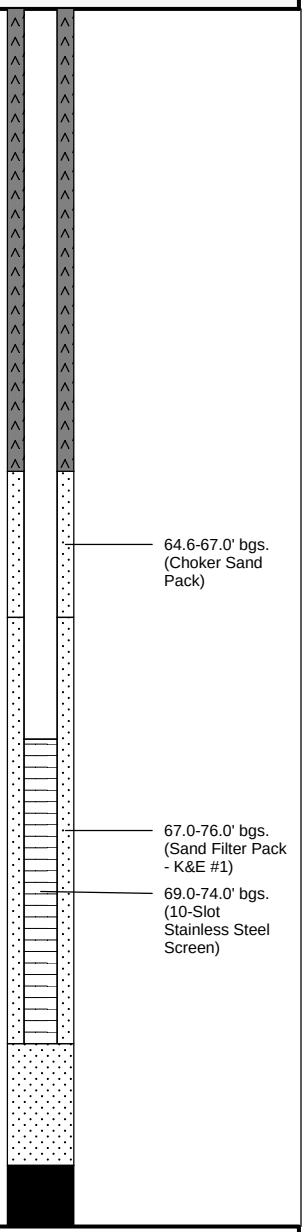
Well/Boring ID: **MW-13-23**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
60 -60				2.4			
				3.0			
				1.6			
				2.0			Note: Trace clay, high plasticity, 61.0' bgs.
	9	56.0-67.0	10.0	1.8			Note: trace silt at 62.0' bgs.
				1.2			
				3.9			Note: moist at 64.5' bgs.
65 -65				5.4			
				3.3			Note: Little silt from 66.0-67.0' bgs.
				0.0			
				0.0			(68.0-71.0') SAND, very fine; and SILT, low plasticity, slow dilatancy; moist to wet; stiff; dark grayish brown (10YR 4/2).
				0.3			Note: Trace granules to small pebbles, subangular, from 69.0-71.0' bgs.
70 -70				0.0			
				0.3			(71.0-72.5') SAND, very fine to fine; little silt; well sorted; moist; dark grayish brown.
	10	67.0-77.0	10.0	0.1			(72.5-73.0') SILT, low plasticity, slow dilatancy; little very fine sand; moist; stiff; dark grayish brown.
				0.4			(73.0-77.0') CLAY, low plasticity; little coarse sand, subangular; little small to very large pebbles, subrounded; dry; very stiff; dark grayish brown.
				0.6			
75 -75				0.9			Note: Little silt at 75.0' bgs
				0.7			

Well/Boring Construction



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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
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Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
80 -80	11	77.0-80.0	3.0	0.1 0.			(77.0-78.5') SAND, very fine to fine, subrounded to subangular; and SILT, nonplastic, rapid dilatancy; wet; soft; brown (10YR 4/3). (78.5-80.0') SAND, fine; some silt, nonplastic; well sorted; moist; brown (10YR 4/3). Note: Increase in silt downwards, little clay at 80.0' bgs.	76.0-81.5' bgs. (Bentonite Pellets)
	12	80.0-81.5	1.5	NA			(80.0-81.5') SANDSTONE, very fine to fine sand; little silt; light gray (10YR 7/1). Note: Bedrock, slightly weathered from 80.0-80.5' bgs.	
85 -85							End of boring at 81.5' bgs.	
90 -90								
95 -95								

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3-29-13/4-2-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.77
Easting: 13063582.72
Casing Elevation: 864.35

Borehole Depth: 81.5' bgs
Surface Elevation: 861.48

Descriptions By: C. Barton

Well/Boring ID: **MW-13-24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 860				NA			(0.0-1.0') CONCRETE.	
				0.1			(1.0-2.0') SAND, medium to very coarse, subrounded to subangular; poorly sorted; moist; dark gray (10YR 4/1). Note: Fill.	
	1	0.0-5.0	5.0	0.2			(2.0-18.0') SAND, medium to very coarse, subangular; little clay, low plasticity; poorly sorted; moist; very dark gray (10YR 3/1). Note: Fill.	
				0.2				
				0.2				
5				0.1				
855	2	5.0-7.0	2.0	0.1				
				0.0			Note: Trace silt at 7.0' bgs.	
				0.0				
				0.1			Note: Moist to wet from 7.0-10.0' bgs, 12.0-13.0' bgs and 16.0-18.0' bgs.	
10				0.1				
850				0.1				
	3	7.0-17.0	10.0	0.0				
				0.1				
				0.1				
15				0.3				
845				0.1				

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3-29-13/4-2-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.77
Easting: 13063582.72
Casing Elevation: 864.35

Borehole Depth: 81.5' bgs
Surface Elevation: 861.48

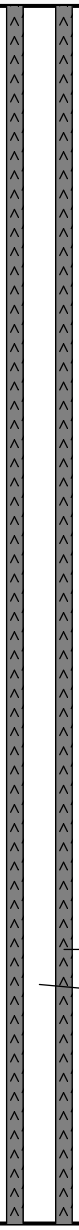
Descriptions By: C. Barton

Well/Boring ID: **MW-13-24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				3.9				
	4	17.0-19.0		5.8			(18.0-22.0') CONCRETE. Note: Basement floor, large 1 inch thick rebar.	
				9.8			Note: Bags from 19.0-36.0' bgs were very hot in temperature; enough to melt bags.	
20				4.9				
840				31.6			(22.0-22.5') CLAY, low plasticity; some small to medium pebbles, angular; dry; hard; dark yellowish brown (10YR 5/6).	
	5	19.0-26.0	7.0	49.2			(22.5-24.0') SAND, medium to very coarse, subangular; and PEBBLES, small to large, angular; some granules, angular; poorly sorted; dry; yellowish brown (10YR 5/6).	
				16.9				
				54.2			(24.0-25.0') SAND, fine to medium, subangular; trace very coarse, subangular; well sorted; dry; yellowish brown (10YR 5/6).	
25				NA			(25.0-27.0') SAND, fine to medium, some coarse to very coarse sand, subangular; poorly sorted; pale brown. Note: Trace silt from 25.0-25.5' bgs.	
835				7.2				
				36.1			(27.0-31.0') SAND, medium to very coarse, subrounded to subangular; and PEBBLES, small to medium, subrounded to subangular; some granules, subrounded to subangular; poorly sorted; dry; pale brown (10YR 6/3).	
				5.2				
				2.3				
30				7.2				
	6	26.0-36.0	8.75	28.2			(31.0-33.0') SAND, very fine to fine; little silt; well sorted; moist; very pale brown (10YR 7/3).	
830				11.4				
				13.8			(33.0-36.0') SAND, medium to very coarse, subangular to subrounded; and GRANULES, subangular; little small pebbles, subangular; poorly sorted; dry; pale brown (10YR 6/3).	
35				7.9			Note: Little silt at 35.5' bgs.	
825				0.0			(36.0-39.0') SAND, fine to medium, subrounded; trace granules, subrounded; well sorted; dry; pale brown (10YR 6/3).	



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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3-29-13/4-2-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.77
Easting: 13063582.72
Casing Elevation: 864.35

Borehole Depth: 81.5' bgs
Surface Elevation: 861.48

Descriptions By: C. Barton

Well/Boring ID: **MW-13-24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0				
				0.4				
				0.9			(39.0-42.0') SAND, fine to coarse, subrounded to subangular; some granules to medium pebbles, subangular; poorly sorted; dry; light gray (10YR 7/2).	
40								
				NA			Note: Little silt from 40.5-42.0' bgs.	
820	7	36.0-46.0	10.0	4.9				
				3.7			(42.0-44.5') SILT, little clay, low plasticity; no dilatancy; dry; hard; light yellowish brown (10YR 6/4).	
				0.0			Note: Color change to light brownish gray (10YR 6/2) at 43.0' bgs.	
				3.0			(44.5-48.0') SAND, very fine to fine, trace large to very large pebbles, angular; little silt; poorly sorted; dry; light gray (10YR 7/1).	
45								
				0.0			Note: Moist, well sorted, decrease in pebbles, at 45.0' bgs.	
815				NA				
				0.1				
				N			(46.0-47.5') SAND, fine to medium, little very fine sand, little to some granules to small pebbles, subrounded to subangular; poorly sorted; dry; grayish brown (10YR 5/2).	
				0.0			(47.5-50.0') SAND, very fine to fine, trace granules, subrounded; little silt; poorly sorted; dry; light gray (10YR 7/2).	
50								
				0.6			(50.0-56.0') SAND, very fine to fine; some small to large pebbles, subangular; little silt; poorly sorted; dry; light gray (10YR 7/2).	
810	8	46.0-56.0	10.0	0.0				
				1.6				
				N				
				8.3				
55								
				1.1			Note: Fining downwards, decrease in pebbles, at 55.0' bgs.	
805				8.1			(56.0-59.0') SAND, very fine to fine; trace granules, subrounded; trace silt; well sorted; dry; light brownish gray (10YR 6/2).	

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3-29-13/4-2-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.77
Easting: 13063582.72
Casing Elevation: 864.35

Borehole Depth: 81.5' bgs
Surface Elevation: 861.48

Descriptions By: C. Barton

Well/Boring ID: **MW-13-24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
				4.0			
				1.9			
				30.1			(59.0-66.0') SILT, nonplastic, no dilatancy; and SAND, very fine; moist to dry; medium stiff to stiff; gray (10YR 5/1).
60							
				14.3			
800	9	56.0-66.0	7.0				Note: Bag temperature high from 56.0-61.0' bgs.
				2.1			
				3.5			
							Note: Rapid dilatancy, moist to wet, from 63.0-65.0' bgs.
				0.4			
							Note: Trace to little very fine sand from 63.0-66.0' bgs.
				2.1			
65				0.6			Note: Moist from 65.0-66.0' bgs.
				0.8			
795				1.8			(66.0-77.0') SILT, low plasticity, slow dilatancy; little very fine sand; moist; stiff; dark gray (10YR 4/1).
							Note: Increase sand from 67.0-68.0' bgs.
				NA			
							Note: Moist to wet, rapid dilatancy from 68.0 to 74.0' bgs.
				0.0			
				0.0			
70							
				0.0			
790	10	66.0-76.0	10.0				
				0.0			
				0.0			
				0.0			
							Note: Increase sand, moist, no to slow dilatancy from 74.0-76.0' bgs.
75				0.0			
				0.0			
785							Note: Soft, moist, from 76.0-77.0' bgs.
				0.0			(77.0-77.5') SAND, very fine to fine; some silt; well sorted; moist to wet; grayish

Well/Boring Construction

65.0-67.0' bgs. (Choker Sand Pack)

67.0-76.0' bgs. (Sand Filter Pack - K&E #1)

69.0-74.0' bgs. (10-Slot Stainless Steel Screen)

Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

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Date Start/Finish: 3-29-13/4-2-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452839.77
Easting: 13063582.72
Casing Elevation: 864.35

Borehole Depth: 81.5' bgs
Surface Elevation: 861.48

Descriptions By: C. Barton

Well/Boring ID: **MW-13-24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
							brown (10YR 5/2).	
				0.0			(77.5-81.0') SILT, low plasticity, rapid dilatancy; little very fine sand; moist to wet; medium stiff; gray (10YR 5/1). Note: Laminated.	
				0.0				
				0.0			Note: Increase in very fine sand to >50% from 79.0-80.0' bgs	
80				0.0			Note: Slow to no dilatancy at 81.0' bgs.	
780	11	76.0-86.0	10.0	0.0			(81.0-82.0') CLAY, little silt, medium plasticity; moist; stiff; gray (10YR 5/1). Note: Interbedded.	
				0.0			(82.0-83.5') SAND, medium to very coarse, subangular; trace small pebbles; little silt; poorly sorted; moist to wet; dark grayish brown (10YR 5/2).	
				0.0			(83.5-94.5') CLAY and SILT, low plasticity, no dilatancy; moist; stiff; gray (10YR 4/1) and reddish gray (10YR 4/2). Note: Interbedded.	
85				0.0				
775				0.0				
				0.0			Note: Moist, very fine sand seams at 87.5' and 89.0' bgs.	
				0.0				76.0-101.0' bgs. (Bentonite Pellets)
				0.0				
90				0.0			Note: Rapid dilatancy, moist to wet, from 90.0-93.0' bgs.	
770	12	86.0-96.0	10.0	0.0				
				0.0				
				0.0				
				0.0				
95				0.0			(94.5-96.0') SAND, very fine to fine; trace to little silt; well sorted; moist; brown (10YR 4/3).	
765				NA			(96.0-99.0') SAND, very fine to fine; and SILT, rapid dilatancy; well sorted; wet; brown (10YR 4/3).	

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Groundwater encountered at 77.0' bgs.
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Date Start/Finish: 3-29-13/4-2-13
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Driller's Name: Scott Parks/Chris Barden
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Sampling Method: Sonic
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Northing: 452839.77
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Casing Elevation: 864.35

Borehole Depth: 81.5' bgs
Surface Elevation: 861.48

Descriptions By: C. Barton

Well/Boring ID: **MW-13-24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0				
	13	96.0-101.0	4.25	0.0			Note: Slow dilatancy from 98.5-99.0' bgs.	
100				0.0			(99.0-101.0') SAND, very fine to fine; well sorted; moist; light gray (10YR 7/1). Note: Weathered bedrock.	
				0.0				
760							End of boring at 101.0' bgs.	
105								
755								
110								
750								
115								
745								

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 4-2-13
Drilling Company: Boart Longyear
Driller's Name: Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452639.36
Easting: 13063775.23
Casing Elevation: 863.77

Borehole Depth: 81.5' bgs
Surface Elevation: 860.49

Descriptions By: C. Barton

Well/Boring ID: **MW-13-25**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 860				NA			(0.0-2.0') ASPHALT/CONCRETE.	
				0.0				
	1	0.0-5.0	5.0	0.0			(2.0-3.0') SAND, medium to very coarse, subangular; and PEBBLES, small to medium, subangular to subrounded; little clay; poorly sorted; moist; brown (10YR 4/3).	
				0.0			(3.0-11.0') CLAY, medium plasticity; little coarse sand, subangular; little medium pebbles, subangular; dry to moist; very stiff; brown (10YR 4/3).	
				0.0				
5 / 855				0.0			Note: High plasticity, moist, at 5.0' bgs.	
	2	5.0-7.0	2.0	0.0				
				0.1			Note: Decrease plasticity at 7.0' bgs.	
				0.3				
				0.5				
10 / 850				0.8				
	3	7.0-16.0	9.0	0..5			(11.0-16.0') CLAY, medium plasticity; little coarse sand, subangular; little granules to large pebbles, subrounded to subangular; dry to moist; stiff; grayish brown (10YR 5/2).	
				1.2				
				0.0				
				0.4				
15 / 845				0.0			Note: High plasticity at 15.0' bgs.	
				0.0			(16.0-23.0') CLAY, high plasticity; little granules to small pebbles, subrounded to subangular; moist; stiff; dark grayish brown (10YR 4/2). Note: Till.	

Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 66.0' bgs.
No staining or odor observed.

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Date Start/Finish: 4-2-13
Drilling Company: Boart Longyear
Driller's Name: Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452639.36
Easting: 13063775.23
Casing Elevation: 863.77

Borehole Depth: 81.5' bgs
Surface Elevation: 860.49

Descriptions By: C. Barton

Well/Boring ID: **MW-13-25**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.1				
				0.2				
				0.3			Note: Sand seam at 19.0' bgs.	
20 / 840								
				0.0			Note: Medium stiff at 20.0' bgs.	
	4	16.0-26.0	10.0	0.0				
				0.5				
				1.0			(23.0-30.0') SAND, fine to medium, subrounded; well sorted; moist to wet; dark yellowish brown (10YR 4/4).	
25 / 835				0.8				
				1.0				
				0.0			Note: Some clay from 26.0-30.0' bgs.	
				0.5				
				0.0				
				0.3				
30 / 830							(30.0-30.5') SILT, low plasticity, rapid dilatancy; little very fine sand; wet; medium stiff; gray (10YR 5/1). Note: Laminated.	
				0.3			(30.5-32.0') SAND, very fine to fine; and SILT, nonplastic, rapid dilatancy; wet; gray (10YR 5/1). Note: Interbedded.	0.0-62.0' bgs. (Quik Grout)
	5	26.0-36.0	10.0	0.0				
				0.0			(32.0-34.0') CLAY, rapid dilatancy; little fine sand, wet; medium stiff; gray (10YR 5/1). Note: Interbedded.	-3.25-67.0' bgs. (Sch. 40 PVC 2.0" Well Casing)
				0.0			(34.0-41.0') CLAY, high plasticity, no dilatancy; trace to little small to medium pebbles, subrounded to subangular; moist; soft; dark gray (10YR 4/1).	
35 / 825				0.0				
				0.1				

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Date Start/Finish: 4-2-13
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Driller's Name: Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452639.36
Easting: 13063775.23
Casing Elevation: 863.77

Borehole Depth: 81.5' bgs
Surface Elevation: 860.49

Descriptions By: C. Barton

Well/Boring ID: **MW-13-25**

Client: RACER

Location: RACER Lansing Plant 3
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Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.2				
				0.0			Note: Little pebbles, little coarse sand, at 38.0' bgs.	
40				2.6				
820				3.3			Note: Medium stiff at 40.0' bgs.	
	6	36.0-46.0	10.0	0.7			(41.0-46.0') SAND, very fine to fine; well sorted; moist; pale brown (10YR 6/3).	
				0.2				
				0.5				
45				1.3				
815				0.9				
				0.1			(46.0-49.5') SAND, very fine to fine; little silt, rapid dilatancy; well sorted; wet; grayish brown (10YR 5/2).	
				0.0				
				0.0			Note: Slow dilatancy at 48.0' bgs.	
50				0.5			(49.5-56.0') SAND, very fine to fine; little to trace silt; well sorted; moist; pale brown (10YR 6/3).	
810	7	46.0-56.0	10.0	0.3				
				2.6				
				0.8				
				0.3				
55				2.0				
805				0.0			(56.0-60.0') SAND, very fine to fine; and CLAY, medium to high plasticity; poorly sorted; wet; very soft; grayish brown (10YR 6/3).	

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 66.0' bgs.
No staining or odor observed.

Date Start/Finish: 4-2-13
Drilling Company: Boart Longyear
Driller's Name: Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452639.36
Easting: 13063775.23
Casing Elevation: 863.77

Borehole Depth: 81.5' bgs
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Descriptions By: C. Barton

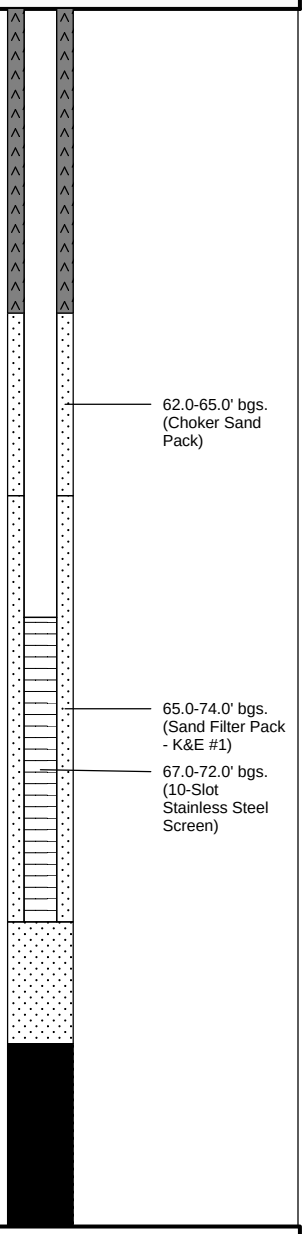
Well/Boring ID: **MW-13-25**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
				0.1			
				0.0			
				0.7			
60 / 800	8	56.0-66.0	9.0	0.0			(60.0-61.0') SAND, fine to coarse, subrounded; little small to large pebbles, subrounded; little silt; poorly sorted; moist; brown (10YR 4/3).
							(61.0-61.5') CLAY, low plasticity; little fine to medium sand; little small to medium pebbles, subrounded to subangular; moist; stiff; grayish brown (10YR 5/2).
				2.9			(61.5-66.0') SAND, very fine to fine; well sorted; moist; brown (10YR 5/3).
				0.6			
				0.6			
				1.2			
65 / 795				0.7			
				0.0			(66.0-69.0') SILT, low plasticity, rapid dilatancy; little to some very fine sand; wet; medium stiff; dark brownish gray (10YR 4/2).
				0.0			
				0.0			
				0.1			(69.0-73.0) CLAY, some silt, medium plasticity, slow dilatancy; moist to wet; medium stiff; dark brownish gray (10YR 4/2).
70 / 790	9	66.0-76.0	10.0	0.0			
				0.0			
				0.0			(73.0-78.0') SILT, nonplastic, slow to no dilatancy; little very fine to fine sand; moist; stiff; dark brownish gray.
				0.0			Note: Fine to medium sand pockets, moist, from 73.0-73.5' bgs, 74.5-75.0' bgs, and 75.5-75.75' bgs.
75 / 785				0.0			
				0.2			

Well/Boring Construction



ARCADIS
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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 66.0' bgs.
No staining or odor observed.

Date Start/Finish: 4-2-13
Drilling Company: Boart Longyear
Driller's Name: Chris Barden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 452639.36
Easting: 13063775.23
Casing Elevation: 863.77

Borehole Depth: 81.5' bgs
Surface Elevation: 860.49

Descriptions By: C. Barton

Well/Boring ID: **MW-13-25**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.1				
				0.0			(78.0-85.0') CLAY, some silt, medium plasticity, slow to no dilatancy; moist; stiff; dark gray (10YR 4/1) and reddish gray (5YR 5/2).	
				0.1				
80								
780				0.0				
	10	76.0-86.0	10.0	0.0				74.0-90.0' bgs. (Bentonite Pellets)
				0.0				
				0.0				
85							(85.0-85.5') CLAY, low plasticity; little fine sand, little small pebbles, subangular to subrounded; dry; hard; dark grayish brown (10YR 4/2).	
775				0.0			(85.5-90.0') SAND, medium, subrounded; little small to very large pebbles, subrounded to subangular; little silt; moist; poorly sorted; gray (10YR 6/1). Note: Appears to be weathered bedrock.	
				0.0				
	11	86.0-90.0	3.0	0.5				
				0.7				
90								
770				NA			End of boring at 90.0' bgs.	
				NA				
				NA				
				NA				
				NA				
95								
765				NA				
				NA				

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 66.0' bgs.
No staining or odor observed.

Date Start/Finish: 4-3-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 453181.44
Easting: 13063787.52
Casing Elevation: 863.95

Borehole Depth: 108.0' bgs
Surface Elevation: 861.67

Descriptions By: C. Barton

Well/Boring ID: **MW-13-26**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 860	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0 0.1			(0.0-2.0') CLAY, low plasticity; and SAND, coarse to very coarse, subangular to subrounded; little small to medium pebbles, subrounded; moist; medium stiff; dark brown (10YR 3/3). Note: Fill. (2.0-5.0') SAND, fine to medium, little small to medium pebbles, subrounded; little clay; poorly sorted; dark yellowish brown (10YR 4/4). Note: Fill. Note: moist to wet from 4.0-5.0' bgs.	
5 / 855	2	5.0-7.0	2.0	0.1 0.0			(5.0-22.0') CLAY, high plasticity; little medium to coarse sand, subrounded; trace small to medium pebbles, subrounded; moist; soft; brown (10YR 5/3). Note: Fill.	
10 / 850	3	7.0-17.0	6.5	0.0 0.0 0.0 0.0 0.0 0.0 0.2			Note: Medium to low plasticity, some sand, moist to wet, at 8.0' bgs.	
15 / 845				0.0				

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 4-3-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 453181.44
Easting: 13063787.52
Casing Elevation: 863.95

Borehole Depth: 108.0' bgs
Surface Elevation: 861.67

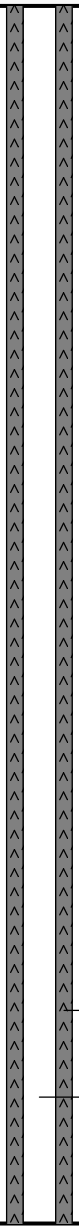
Descriptions By: C. Barton

Well/Boring ID: **MW-13-26**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				16.3			Note: Concrete debris in clay, high plasticity, from 17.0-22.0' bgs.	
				12.0				
20				29.0				
				38.7				
840	4	17.0-27.0	10.0				(22.0-24.0') CONCRETE.	
				5.7				
				3.7				
				6.3			(24.0-25.25') CLAY, low plasticity; little coarse sand, subrounded; little granules to medium pebbles, subangular; dry; hard; grayish brown (10YR 5/2).	
25				13.0			(25.25-32.5') SAND, fine, subrounded; little very fine sand, trace small to medium pebbles, subrounded; well sorted; dry; brownish yellow (10YR 6/6).	
835				2.5				
				5.0				
				3.9				
30				0.2			Note: Little coarse to granules, subangular, from 30.0-31.0' bgs.	
				3.1				
830	5	27.0-37.0	10.0					
				0.0			(32.5-33.5') SILT, nonplastic, no dilatancy; little very fine sand; dry; medium stiff; light yellowish brown (10YR 6/4) and gray.	
				0.0			(33.5-36.0') SAND, very fine to fine; trace silt; well sorted; moist to dry; very pale brown (10YR 7/4).	
35				0.0				
				0.3			Note: Gray silt from 35.75-36.0' bgs.	
825				0.0			(36.0-40.0') SAND, fine to medium, subrounded to subangular; trace medium pebbles, rounded; little silt; poorly sorted; moist to dry; very pale brown (10YR 7/4).	



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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 4-3-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 453181.44
Easting: 13063787.52
Casing Elevation: 863.95

Borehole Depth: 108.0' bgs
Surface Elevation: 861.67

Descriptions By: C. Barton

Well/Boring ID: **MW-13-26**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.2				
				7.9			Note: Little to some silt from 38.5-40.0' bgs.	
				4.1				
40								
				9.5			(40.0-44.5') SAND, very fine, subrounded; well sorted; dry; light gray (10YR 4/2).	
820				11.3				
	6	37.0-47.0	10.0				Note: Trace silt, moist, color change to brown (10YR 4/3), from 42.0-44.5' bgs.	
				5.3				
				6.4				
				6.5			(44.5-49.0') SAND, very fine to fine, trace granules to small pebbles, subrounded; well sorted; moist; pale brown (10YR 6/3).	
45								
				0.0				
815				0.0				
				0.9				
				0.2			Note: Trace clay at 47.5' bgs; moist to wet at 48.0' bgs.	
							(49.0-49.5') CLAY, high plasticity; trace medium to large pebbles, subrounded; moist; stiff; dark gray (10YR 4/1).	
				0.0			(49.5-50.0') SAND, fine to medium, trace to little granules to small pebbles, subrounded; poorly sorted; moist; brown (10YR 4/3).	
50								
				0.0			(50.0-55.25') CLAY, low plasticity; little fine to coarse sand, subrounded; little to some granules to medium pebbles, subrounded; dry to moist; stiff; dark grayish brown (10YR 4/2).	
810				0.0				
	7	47.0-57.0	10.0				Note: Very stiff, dry, at 52.5' bgs.	
				0.0				
				0.0				
				0.0				
55								
				0.0			(55.25-60.5') SAND, very fine; and CLAY, little silt, low plasticity; poorly sorted; moist to dry; gray (10YR 5/1).	
805				0.0				

Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

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Date Start/Finish: 4-3-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 453181.44
Easting: 13063787.52
Casing Elevation: 863.95

Borehole Depth: 108.0' bgs
Surface Elevation: 861.67

Descriptions By: C. Barton

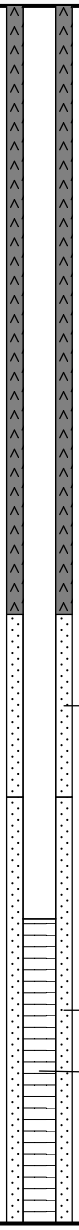
Well/Boring ID: **MW-13-26**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
				0.0			
				0.0			
				0.0			
60				0.0			(60.5-66.0') SILT, nonplastic, slow dilatancy; little fine sand; moist; stiff.
800	8	57.0-67.0	10.0	0.0			
				0.0			Note: Moist to wet from 62.5-63.5' and 64.0-65.0' bgs.
				0.0			
65				0.0			Note: Some sand from 65.0-67.0' bgs.
795				0.0			(66.0-69.0') SAND, very fine to fine; little silt; well sorted; wet; brown (10YR 4/3).
				0.0			
				0.0			
				0.0			(69.0-75.0') SILT, nonplastic, slow dilatancy; little very fine sand; moist; stiff; gray (10YR 4/1).
70				0.0			Note: Rapid dilatancy, moist to wet, from 69.0-70.0' bgs.
790	9	67.0-77.0	10.0	0.0			
				0.0			Note: Interbedded fine sand, wet, from 72.0-72.5' and 74.0-74.25' bgs.
				0.0			
				0.0			
75				0.0			(75.0-77.0') SAND, fine to very fine; little silt; moist to wet; well sorted; grayish brown (10YR 5/2).
785				0.0			

Well/Boring Construction



Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

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Date Start/Finish: 4-3-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 453181.44
Easting: 13063787.52
Casing Elevation: 863.95

Borehole Depth: 108.0' bgs
Surface Elevation: 861.67

Descriptions By: C. Barton

Well/Boring ID: **MW-13-26**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0			(77.0-80.5') CLAY and SILT, medium to low plasticity, rapid dilatancy; moist to wet; stiff; very dark grayish brown (10YR 3/2) and reddish gray (5YR 5/2). Note: Silt and clay interbedded.	
				0.0				
				0.0			Note: No dilatancy, dry, very stiff, from 79.5-80.0' bgs.	
80				0.0				
780	10	77.0-87.0	10.0	0.1			(80.5-85.0') SAND, fine to medium, subrounded; trace very fine sand; well sorted; moist; reddish gray (5YR 5/2).	
				0.0				
				0.0				
				0.0				
85				0.0			(85.0-88.0') CLAY, high plasticity; trace fine sand; dry to moist; very stiff; very dark grayish brown (10YR 3/2).	
775				0.0				
				0.0			(88.0-96.0') CLAY and SILT, low plasticity, slow dilatancy; moist to wet; stiff; very dark grayish brown (10YR 3/2).	
				0.0				
				0.0			Note: Little fine sand from 90.0-96.0' bgs.	
90				0.0				
770	11	87.0-97.0	10.0	0.0			Note: trace large pebbles, subrounded, from 92.0-93.0' bgs.	
				0.0				
				0.0				
				0.0			Note: Very fine to fine sand layer, wet, from 94.5-94.60' bgs.	
95				0.0				
765				0.0			(96.0-97.0') CLAY, low plasticity; and SAND, very fine to fine; moist to wet; no dilatancy; medium stiff; very dark grayish brown (10YR 3/2).	82.5-108.0' bgs. (Bentonite Pellets)

Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

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Date Start/Finish: 4-3-13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: 453181.44
Easting: 13063787.52
Casing Elevation: 863.95

Borehole Depth: 108.0' bgs
Surface Elevation: 861.67

Descriptions By: C. Barton

Well/Boring ID: **MW-13-26**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0			(97.0-98.0') SAND, fine to medium, little coarse sand, subrounded; little medium to large pebbles, subangular; poorly sorted; wet; gray (10YR 6/1).	
				0.0			(98.0-106.0') SAND, medium, trace coarse sand, subrounded; well sorted; wet; brown (10YR 4/3).	
100				0.0				
				0.0				
760				0.0				
	12	97.0-107.0	10.0				Note: Little coarse sand from 102.0-104.0' bgs.	
				0.0				
				0.0				
105				0.0				
				0.0				
755				0.0			(106.0-108.0') SAND, fine to medium, subrounded; well sorted; wet; brown (10YR 4/3).	
	13	107.0-108.0	0.0				Note: Bedrock encountered at 108.0' bgs.	
							End of boring at 108.0' bgs.	
110								
750								
115								
745								

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.15.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 80.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

Well/Boring ID: **MW-13-27**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0				NA			(0.0'-1.5') CONCRETE	
				0.0			(1.5'-3.75') CLAY, medium plasticity; little fine sand; little to trace large pebbles, subrounded; moist; medium stiff to stiff; yellowish brown (10YR 5/4).	
	1	0.0-5.0	5.0	0.0				
				0.4			NOTE: Increase sand to some at 3.0' bgs.	
				0.5			(3.75'-9.0') CLAY, low plasticity; little medium sand, subrounded; little some small to large pebbles, subangular to subrounded; moist; stiff; very dark gray (10YR 3/1).	
5 / -5				0.9				
	2	5.0-7.0	2.0	0.9			NOTE: Degraded cloth at 6.0' bgs.	-3.0-67.0' bgs. (Sch. 40 PVC 2.0" Well Casing)
							NOTE: Color change at 7.0' bgs to brown (10YR 4/3).	0.0-63.0' bgs. (Neat Cement Slurry)
				0.4				
				0.4			(9.0'-15.75') CLAY, high plasticity; little fine to medium sand, subrounded to subangular; little small pebbles, subangular; moist; medium stiff; brown (10YR 4/3).	
10 / -10	3	7.0-17.0	9.75	0.6				
				0.7				
				0.3				
				0.2				
				0.1				
15 / -15				0.1				

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 29.5'-32.0', 37.0'-39.0', 56.0'-57.5', at 68.0', from 69.0'-72.5' and from 74.0'-80.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.15.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 80.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

Well/Boring ID: **MW-13-27**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.1			(15.75'-17.0') PEAT; silt; little clay sized particles; trace wood / roots; black (10YR 2/1).	
				0.0			(17.0'-17.5') CLAY, high plasticity; little medium to coarse sand, subangular; moist; soft.	
				0.1			(17.5'-18.0') SAND, medium to very coarse, angular; little clay; some granules to medium pebbles, angular; poorly sorted; moist; dark grayish brown (10YR 5/2).	
				1.2			(18.0'-29.5') CLAY, high plasticity; little fine to medium sand; little to trace small to medium pebbles, subrounded; moist; soft; dark grayish brown (!0YR 5/2).	
20 -20	4	17.0-27.0	10.0	0.3				
				0.9				
				1.1				
				0.0			NOTE: Change to medium stiff at 22.0' bgs.	
				0.3				
				0.3				
25 -25				0.1				0.0-63.0' bgs. (Neat Cement Slurry)
								-3.0-67.0' bgs. (Sch. 40 PVC 2.0" Well Casing)
				0.0				
				1.1			NOTE: Small cobble, subrounded at 28.0' bgs.	
				0.4				
				1.5			(29.5'-32.0') SAND, fiine to coarse, subangular; some small to large pebbles, subrounded; some clay; moist to wet; poorly sorted; dark grayish brown (10YR 5/2). NOTE: Decrease pebbles to little.	
30 -30	5	27.0-37.0	10.0	0.7				
				0.2				
				0.9			(32.0'-34.0') CLAY, high plasticity; little coarse to very coarse sand, subrounded; little silt; trace to little small pebbles, subangular to subrounded; moist; medium stiff; dark grayish brown.	
				0.6				
				0.5			(34.0'-37.0') SAND, very fine to fine, subrounded; well sorted; moist; pale brown (10YR 6/3).	

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 29.5'-32.0', 37.0'-39.0', 56.0'-57.5', at 68.0', from 69.0'-72.5' and from 74.0'-80.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.15.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 80.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

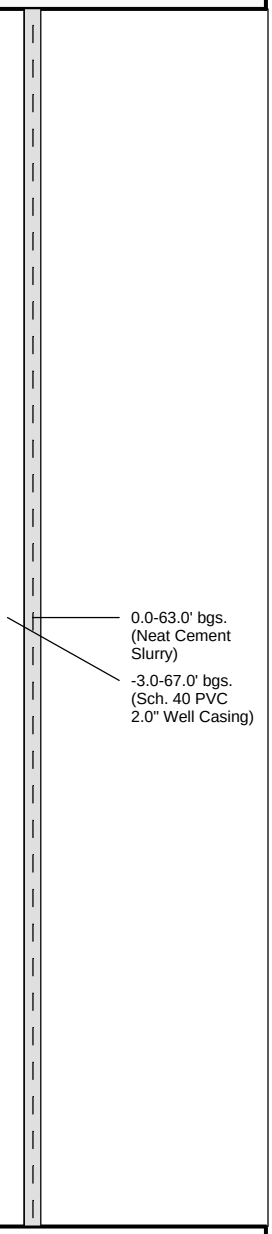
Well/Boring ID: **MW-13-27**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
				0.0			
				3.5			(37.0'-39.0') SAND, medium to very coarse, subangular; little to some silt; little to some clay, medium plasticity; very soft; moist to wet; dark grayish brown.
				1.4			(39.0'-40.0') CLAY, low plasticity; and SAND, very fine to fine; little coarse to small pebbles, subrounded to subangular; little silt; moist; soft to medium stiff; dark grayish brown (10YR 4/2).
40 -40	6	37.0-47.0	9.0	0.2			(40.0'-43.0') SAND, very fine to fine; trace silt; well sorted; moist; yellowish brown (10YR 5/6).
				14.9			
				2.4			
				3.6			NOTE: Trace wood at 42.5' bgs.
				1.4			(43.0'-45.0') SAND, medium to very coarse, subrounded to rounded; some granules to medium pebbles, subrounded to rounded; poorly sorted; moist; yellowish brown (10YR 5/4).
45 -45				10.5			(45.0'-45.9') SAND, fine to medium, little coarse to very coarse, subrounded; trace granules to small pebbles, subrounded; poorly sorted; moist; yellowish brown.
				5.9			(45.9'-46.1') SILT, little very fine sand, slow to no dilatancy; dry to moist; pale brown (10YR 6/3).
				2.6			(46.1'-48.5') SAND, very fine to fine; trace silt; well sorted; dry to moist; pale brown (10YR 6/3).
				5.3			(48.5'-51.5') SAND, very fine to fine; little to some silt; well sorted; dry to moist; yellowish brown (10YR 5/4).
50 -50	7	47.0-57.0	10.0	5.6			
				2.3			
				6.7			(51.5'-56.0') SAND, very fine to fine; trace silt; well sorted; dry to moist; pale brown (10YR 6/3). NOTE: Grayish silt seams at 52.0' and 54.0' bgs.
				2.0			
				0.2			

Well/Boring Construction



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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 29.5'-32.0', 37.0'-39.0', 56.0'-57.5', at 68.0', from 69.0'-72.5' and from 74.0'-80.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.15.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 80.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

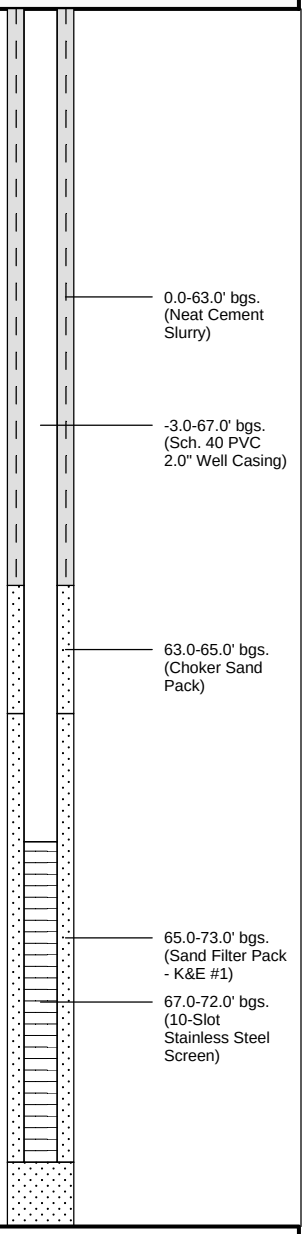
Well/Boring ID: **MW-13-27**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
55 -55				2.9			NOTE: Moist at 54.0' bgs.
				2.4			
				3.6			(56.0'-57.5') SAND, very fine to fine, little to some medium; some silt, slow dilatancy; moist to wet; very stiff; grayish brown (10YR 5/2).
				2.5			(57.5'-61.0') CLAY, low plasticity; and SAND, very fine to fine; little silt; little granules to large pebbles, subrounded to subangular; moist; very stiff to hard; grayish brown (10YR 5/2).
				8.1			
60 -60	8	57.0-67.0	10.0	2.5			
				2.2			
				1.7			(61.0'- 69.0') SAND, very fine to fine; trace silt; well sorted; moist; light brownish gray (10YR 6/2).
				2.7			
				1.0			
				1.2			
65 -65				1.7			
				1.7			
				2.0			
				5.3			NOTE: Wet at 68.0' bgs.
				1.0			(69.0'-72.5') SAND, fine to medium, subrounded; trace granules, subrounded; well sorted; wet; grayish brown (10YR 5/2).
70 -70	9	67.0-77.0	10.0	0.8			
				0.8			
				1.5			

Well/Boring Construction



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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 29.5'-32.0', 37.0'-39.0', 56.0'-57.5', at 68.0', from 69.0'-72.5' and from 74.0'-80.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.15.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 80.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

Well/Boring ID: **MW-13-27**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.5			(72.5'-74.0') CLAY, high plasticity; little fine sand; little granules to large pebbles, subrounded; moist; stiff; grayish brown (10YR 5/2).	
75 -75				1.0			(74.0'-78.0') SAND, fine to medium; some silt; little coarse to granules, subrounded; trace to little medium to large pebbles, subrounded; poorly sorted; wet; grayish brown (10YR 5/2).	
				1.2				
				0.8				73.0-80.0' bgs. (Bentonite Pellets)
				0.0				
	10	77.0-80.0	2.0				(78.0'-80.0') SILT, slow dilatancy, low plasticity; and SAND, very fine to fine; moist to wet; stiff; gray (10YR 5/1). NOTE: Weathered bedrock at 80.0' bgs.	
				0.0				
				0.0				
80 -80							End of boring at 80.0' bgs.	
85 -85								
90 -90								

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 29.5'-32.0', 37.0'-39.0', 56.0'-57.5', at 68.0', from 69.0'-72.5' and from 74.0'-80.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.18.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic/Wire Line Rockcore
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 115.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton/A. Westhuis

Well/Boring ID: **MW-13-28**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0				NA			(0.0'-1.5') CONCRETE	
	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0			(1.5'-5.0') CLAY, medium to low plasticity; little to some fine sand; little granules to large pebbles, subangular to subrounded; moist; very sitff; brown (10YR 4/3).	
5 / -5	2	5.0-7.0	2.0	0.0 0.0			(5.0'-13.0') CLAY, high plasticity; little fine sand; trace small to medium pebbles, subrounded to subangular; trace silt; moist; stiff; yellowish brown (10YR 5/4) grayish green.	-3.0-99.0' bgs. (4.0" Steel Well Casing) 0.0-99.0' bgs. (Neat Cement Slurry)
10 / -10	3	7.0-17.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0			NOTE: Little small to large pebbles, little granules, subangular at 8.0' bgs.	
15 / -15				0.0 0.0 0.0			(13.0'-18.5') CLAY, high plasticity; little coarse sand to granules, subangular; little fine sand; little small to large pebbles, rounded; trace silt; moist; medium stiff; grayish brown (10YR 5/2). NOTE: Decrease in fine sand at 15.0'.	

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 27.0'-30.0', 34.0'-36.0', 46.0'-49.5', at 64.0', from 65.0'-69.0' and 89.0'-115.0' bgs.
No recovery from 21.0'-27.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.18.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic/Wire Line Rockcore
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 115.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton/A. Westhuis

Well/Boring ID: **MW-13-28**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0				
				0.0			(18.5'-19.0') SILT, no dilatancy; and SAND, very fine to fine; moist; medium stiff; yellowish brown (10YR 5/4).	
				0.0			(19.0'-21.0') SAND, fine to medium; little very coarse to granules, subrounded; little silt; poorly sorted; moist; light yellowish brown (10YR 6/4). NOTE: Increase silt to >30% from 20.0'-21.0' bgs.	
20 -20	4	17.0-27.0	4.5	0.0			(21.'0-21.5') SAND, fine to coarse, subrounded; little very coarse to granules, subrounded to subangular; little small to medium pebbles, subrounded; poorly sorted; moist; light yellowish brown (10YR 6/4). NOTE: Gray silt layer (~ 1/2") at 21.5' bgs.	
				0.0			(21.5'-27.0') No recovery.	
				0.0				
25 -25								0.0-99.0' bgs. (Neat Cement Slurry)
								-3.0-99.0' bgs. (4.0" Steel Well Casing)
				0.0			(27.0'-30.0') CLAY, medium to high plasticity; little fine sand; little silt; little granules to small pebbles; soft; wet to moist; grayish brown (10YR 5/2).	
				0.0				
				0.0				
30 -30	5	27.0-37.0	9.0				(30.0'-34.0') CLAY, high plasticity; little fine sand; little granules to medium pebbles, subrounded to subangular; mosit; medium stiff; grayish brown (10YR 5/2).	
				0.0				
				0.0				
				0.0				
				0.0			(34.0'-36.0') SAND, medium; little coarse, subangular; trace small pebbles, subrounded; trace very large pebbles, rounded; poorly sorted; moist to wet; brown (10YR 4/3).	

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 27.0'-30.0', 34.0'-36.0', 46.0'-49.5', at 64.0', from 65.0'-69.0' and 89.0'-115.0' bgs.
No recovery from 21.0'-27.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.18.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic/Wire Line Rockcore
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 115.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton/A. Westhuis

Well/Boring ID: **MW-13-28**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.)	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
					0.0				
					2.6			(36.0'-39.0') SAND, medium to very coarse, subangular; little granules to small pebbles, subangular to subrounded; poorly sorted; moist; yellowish brown (10YR 5/4).	
					0.0				
					0.0				
40	-40	6	37.0-47.0	10.0	0.5			(39.0'-41.0') SAND, very fine to fine; well sorted; moist; yellowish brown (10YR 5/4).	
					0.0				
					0.0			(41.0'-42.0') SAND, medium; little fine; little coarse, subrounded; trace small pebbles, subrounded; poorly sorted; moist; light yellowish brown (10YR 6/4).	
					0.0			(42.0'-46.0') SAND, very fine to fine; trace medium to coarse; well sorted; moist; pale brown (10YR 6/3).	
					0.0				
					0.0			NOTE: Coarsens downward at 44.0' bgs.	
45	-45				0.0				-3.0-99.0' bgs. (4.0" Steel Well Casing)
					0.0				0.0-99.0' bgs. (Neat Cement Slurry)
					0.0			(46.'0-47.5') SAND, medium to very coarse, subrounded to subangular; little granules to small pebbles, subrounded; trace large pebbles, subrounded; moist to wet; poorly sorted; yellowish brown (10YR 5/4).	
					1.3				
					5.9			(47.5'-50.0') SAND, fine to medium; some silt, very fine; some medium to very large pebbles, rounded; trace small cobble, rounded; poorly sorted; moist; yellowish brown (10YR 5/4).	
					4.7				
50	-50	7	47.0-57.0	8.5	0.0			(50.0'-65.0') SAND, very fine to fine; trace silt; trace small pebbles, subrounded; well sorted; moist; pale brown (10YR 6/3).	
					0.0				
					0.0				
					0.0				

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 27.0'-30.0', 34.0'-36.0', 46.0'-49.5', at 64.0', from 65.0'-69.0' and 89.0'-115.0' bgs.
No recovery from 21.0'-27.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.18.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic/Wire Line Rockcore
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 115.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton/A. Westhuis

Well/Boring ID: **MW-13-28**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
55 -55				0.0 0.0				
				0.0 0.0 0.0			NOTE: No pebbles; color change at 57.0'-60.0' to brown (10YR 5/3).	
60 -60	8	57.0-67.0	10.0	0.0 0.0 0.0 0.0			NOTE: Wet at 64.0' bgs.	-3.0-99.0' bgs. (4.0" Steel Well Casing) 0.0-99.0' bgs. (Neat Cement Slurry)
65 -65				0.0 0.0 0.0			(65.0'-67.0') SAND, very fine; some silt, slow dilatancy; well sorted; wet; grayish brown (10YR 5/2). NOTE: Layer of coarse to very coarse sand at 65.0'; some granules to small pebbles, subrounded; poorly sorted; wet; brown (10YR 5/3).	
				0.0 0.0			(67.0'-69.0') SILT, slow dilatancy; some very fine sand; moist to wet; medium stiff; grayish brown (10YR 5/2).	
70 -70	9	67.0-77.0	10.0	0.0 0.0 0.0 0.0 0.0			(69.0'-79.0') SILT, no dilatancy; little fine sand; moist; medium stiff; dark grayish brown (10YR 4/2).	

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 27.0'-30.0', 34.0'-36.0', 46.0'-49.5', at 64.0', from 65.0'-69.0' and 89.0'-115.0' bgs.
No recovery from 21.0'-27.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.18.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic/Wire Line Rockcore
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 115.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton/A. Westhuis

Well/Boring ID: **MW-13-28**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0			NOTE: Decrease in sand fownward from 73.0' bgs.	
				0.0			NOTE: Drier silt; stiff; at 74.0' bgs.	
75 -75				0.0				
				0.0				
				0.0				
				0.0				
				0.0				
80 -80	10	77.0-87.0	10.0	0.0			(79.0'-89.0') SILT, low to no plasticity, slow dilatancy; little clay; moist; stiff; dark grayish brown (10YR 4/2) and reddish gray.	
				0.0				
				0.0			NOTE: No dilatancy at 82.0' bgs.	-3.0-99.0' bgs. (4.0" Steel Well Casing)
				0.0				0.0-99.0' bgs. (Neat Cement Slurry)
				0.0			NOTE: Increase in clay at 84.0'-85.0' bgs.	
85 -85				0.0				
				0.0				
				0.0			NOTE: No recovery at 87.0'-97.0' bgs but driller encountered weathered bedrock at 90.0' bgs.	
							(89.0'-99.0') SANDSTONE, very fine to fine sand; little silt; well sorted; wet; gray (2.5Y 6/1).	
90 -90	11	87.0-97.0	0.0	NA				

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 27.0'-30.0', 34.0'-36.0', 46.0'-49.5', at 64.0', from 65.0'-69.0' and 89.0'-115.0' bgs.
No recovery from 21.0'-27.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.18.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic/Wire Line Rockcore
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 115.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton/A. Westhuis

Well/Boring ID: **MW-13-28**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
95 -95							
	12	97.0-99.0	0.0	NA			
100-100							(99.0'-115.5') SANDSTONE (Grand River FM), very fine to fine sand; trace to little silt; well sorted; wet; gray (2.5Y 6/1).
	13	99.0-106.0	3.75	NA			
105-105							NOTE: Multiple natural fractures from 106.'-107.0' bgs. Few mechanical fracutres throughout, most seem to be natural.
	14	106.0-109.0	3.0	NA			
110-110							NOTE: Cross bedding from 110.0'-110.5' bgs. Most fractures show weathering along the fracture plane.

Well/Boring Construction

-3.0-99.0' bgs. (4.0" Steel Well Casing)

0.0-99.0' bgs. (Neat Cement Slurry)

99.0-115.5' bgs. (9" Open Borehole)

Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 27.0'-30.0', 34.0'-36.0', 46.0'-49.5', at 64.0', from 65.0'-69.0' and 89.0'-115.0' bgs.
No recovery from 21.0'-27.0' bgs.
No staining or odor observed.

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Date Start/Finish: 4.18.13 / 4.22.13
Drilling Company: Boart Longyear
Driller's Name: Chris Borden
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic/Wire Line Rockcore
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 115.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton/A. Westhuis

Well/Boring ID: **MW-13-28**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
115-115	15	109.0-115.5	5.5	NA				
120-120							End of boring at 115.5' bgs.	
125-125								

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 27.0'-30.0', 34.0'-36.0', 46.0'-49.5', at 64.0', from 65.0'-69.0' and 89.0'-115.0' bgs.
No recovery from 21.0'-27.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.23.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 79.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-29**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0				0.0			(0.0'-0.5') ASPHALT	
				0.0			(0.5'-2.0') SAND, medium to very coarse, some granules to large pebbles, subrounded; little silt; poorly sorted; dry to moist; yellowish brown (10YR 5/6).	
	1	0.0-5.0	5.0	0.0			(2.0'-6.0') CLAY, some silt, low plasticity, no dilatancy; little fine to medium sand, subrounded; dry to moist; medium stiff; grayish brown (10YR 5/2). NOTE: Trace medium to large pebbles, subrounded.	
				0.0				
				0.0				
5 / -5				0.0				
	2	5.0-7.0	2.0	0.0			(6.0'-19.0') CLAY, some silt, high plasticity, no dilatancy; trace to little small to very large pebbles, subrounded; some to little fine to medium sand, subrounded; dry to moist; medium stiff to soft; gray (10YR 5/1).	-3.0-68.0' bgs. (Stainless Steel 10 Slot 2.0" Well Casing)
				0.0				0.0-64.0' bgs. (Neat Cement Slurry)
				0.0				
				0.1			NOTE: (9.0'-10.0') Organic matter, trace small roots and wood; very dark gray (10YR 3/1).	
10 / -10	3	7.0-17.0	7.0	0.3				
				0.1				
				0.0				
				0.1				
15 / -15				0.1				
				0.0				

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 73.8'-79.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.23.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 79.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-29**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
				0.0			
				0.0			
				0.0			
				0.1			(19.0'-25.0') CLAY, little silt, high plasticity, no dilatancy; trace small to large pebbles, subrounded; little very fine to medium sand, subrounded; moist; stiff to medium stiff; gray (10YR 5/1).
20 -20	4	17.0-27.0	9.0	0.0			
				0.1			
				0.0			
				0.0			
				0.0			
25 -25				0.0			(25.0'-26.0') SAND, fine grained, subrounded; trace to little silt; well sorted; dry to moist; very pale brown (10YR 7/3).
				0.1			(26.0'-27.0') SAND, very fine to fine, subrounded; little silt; well sorted; dry to moist; very pale brown (10YR 7/3).
				0.0			(27.0'-28.0') CLAY, some silt, high plasticity, no dilatancy; little sand, fine to medium, subrounded; trace granules to large pebbles, subrounded; moist; medium stiff; gray (10YR 5/1).
				0.0			
				0.2			(28.0'-31.0') CLAY and SILT, low to non-plastic, no dilatancy; some to little fine to medium sand, subrounded; trace granules to large pebbles, subrounded; dry to moist; very stiff to stiff; gray (10YR 5/1).
30 -30	5	27.0-37.0	9.0	0.1			
				0.1			
				0.0			(31.0'-34.0') SAND, fine grained, subrounded; trace silt; well sorted; dry to moist; very pale brown (10YR 7/3).
				0.0			
				0.1			
				0.1			(34.0'-34.9') CLAY, some silt, low plasticity, no dilatancy; some fine sand, subrounded; little granules to small pebbles, subrounded; moist; stiff to medium stiff; gray (10YR 5/1).

Well/Boring Construction

0.0-64.0' bgs. (Neat Cement Slurry)

-3.0-68.0' bgs. (Sch. 40 PVC 2.0" Well Casing)

Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 73.8'-79.0' bgs.
No staining or odor observed.

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Date Start/Finish: 4.23.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 79.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

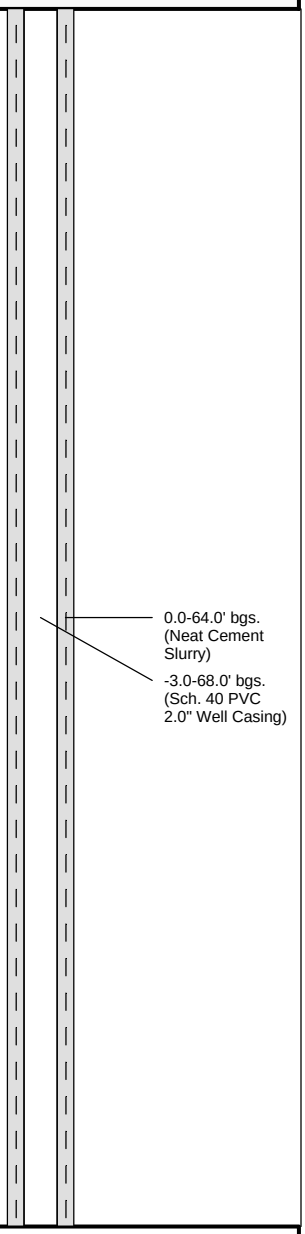
Well/Boring ID: **MW-13-29**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
				0.2 0.1			(34.9'-39.9') SAND, fine to very fine, subrounded; trace silt; well sorted; dry to moist; very pale brown (10YR 7/3).
40 -40	6	37.0-47.0	9.0	0.0 0.0 0.0 0.1 0.1 0.0 0.0 0.1 0.0 0.0			(39.9'-43.5') SAND, very fine to medium, subangular; some granules to small pebbles, trace large to very large pebbles, subangular to subrounded; little silt; poorly sorted; dry; light brownish gray (10YR 6/2). (43.5'-47.0') SAND, very fine to fine, subrounded; little silt; well sorted; dry; light gray (10YR 7/2).
45 -45							
50 -50	7	47.0-57.0	9.5	1.2 2.3 1.1 0.2 0.1 1.3			(47.0'-50.0') SAND, very fine, subrounded; little silt; trace to little granules to small pebbles, subangular to subrounded; poorly sorted; dry; light gray (10YR 7/2). (50.0'-55.0') SAND, very fine, subrounded; little silt; trace granules, subrounded; well sorted; dry; very pale brown (10YR 8/2).

Well/Boring Construction



Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 73.8'-79.0' bgs.
No staining or odor observed.

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Date Start/Finish: 4.23.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 79.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-29**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
55 -55				2.2				
				0.1			(55.0'-57.0') SAND, very fine to fine; little silt, subrounded; well sorted; dry; very pale brown (10YR 7/3).	
				0.0				
				0.1			(57.0'-58.5') SAND, very fine to fine; little silt; trace granules to large pebbles, subrounded; poorly sorted; dry; very pale brown (10YR 7/3).	
				0.4			(58.5'-59.0') SILT, non-plastic, no dilatancy; trace to little fine sand; dry; very stiff; gray (10YR 5/1).	
				1.2			(59.0'-62.0') SAND, very fine, subrounded; little silt; well sorted; dry; light gray (10YR 7/2).	0.0-64.0' bgs. (Neat Cement Slurry)
60 -60	8	57.0-67.0	9.0	1.6				-3.0-68.0' bgs. (Sch. 40 PVC 2.0" Well Casing)
				0.8				
				0.4			(62.0'-68.0') SAND, very fine to fine; little silt; trace granules, subrounded; well sorted; dry; very pale brown (10YR 7/3).	
				0.2				
				0.1				
65 -65				0.3				64.0-66.0' bgs. (Choker Sand Pack)
				0.1				
				0.1				
				0.0			(68.0'-73.0') SAND, fine grained, subrounded; well sorted; moist; pale brown (10YR 6/3).	
				0.0				66.0-74.0' bgs. (Sand Filter Pack - K&E #1)
70 -70	9	67.0-77.0	9.0	0.1				68.0-73.0' bgs. (10-Slot Stainless Steel Screen)
				0.1				
				0.0			(73.0'-73.8') CLAY and SILT, low to non-plastic, no dilatancy; some fine sand,	

Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 73.8'-79.0' bgs.
No staining or odor observed.

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Date Start/Finish: 4.23.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 79.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-29**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0			subrounded; trace granules to medium pebbles, subrounded; moist; stiff; gray (10YR 5/1).	
75 -75				0.0			(73.8'-75.5') SAND, fine to coarse, subrounded; some silt, slow dilatancy; trace granules to very large pebbles, subrounded; poorly sorted; moist to wet; gray (10YR 5/1).	
				0.1			(75.5'-79.0') CLAY and SILT, low to non-plastic, slow dilatancy; trace to little fine to medium sand, subrounded; trace granules to large pebbles, subrounded; moist to wet; stiff; gray (10YR 5/1). NOTE: Small fragments of weathered sandstone.	74.0-79.0' bgs. (Bentonite Pellets)
	10	77.0-79.0		0.1				
				0.0				
80 -80			2.0	0.0			End of boring at 79.0' bgs.	
85 -85								
90 -90								

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 73.8'-79.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.24.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 83.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-30**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0								
				0.0			(0.0'-0.5') CONCRETE	
				0.0			(0.5'-1.5') SAND, medium to coarse, some granules to large pebbles, subrounded; little silt; poorly sorted; dry to moist; yellowish brown (10YR 5/6).	
	1	0.0-5.0	5.0	0.0			(1.5'-5.0') CLAY, some silt, low plasticity, no dilatancy; little fine to medium sand, subrounded; trace to little granules to large pebbles, subrounded; dry to moist; medium stiff; grayish brown (10YR 5/2). NOTE: Slightly mottled gray and brown.	
				0.0				
				0.0				
5 / -5				0.0			(5.0'-7.0') SAND, fine to medium, little granules to medium pebbles, subrounded; little silt; poorly sorted; dry to moist; yellowish brown (10YR 5/6).	
	2	5.0-7.0	2.0	0.0				-3.0-72.0' bgs. (Sch. 40 PVC 2.0" Well Casing)
				0.1			(7.0'-12.0') CLAY and SILT, low plasticity, no dilatancy; some fine to medium sand, subrounded; trace granules to large pebbles, subrounded; dry to moist; medium stiff to stiff; light yellowish brown (10YR 6/4).	0.0-68.0' bgs. (Neat Cement Slurry)
				0.0				
				0.0				
10 / -10	3	7.0-17.0	10.0	0.1				
				0.1				
				0.0			(12.0'-15.5') CLAY, some silt, medium to high plasticity, no dilatancy; little fine to medium sand, subrounded; trace small to large pebbles, subrounded; dry to moist; stiff; grayish brown (10YR 5/2).	
				0.0				
				0.0				
15 / -15				0.0			(15.5'-16.5') SAND, very fine to fine, subrounded; little silt; well sorted; dry; very pale	

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 48.0'-52.0', 55.5'-62.0', at 72.0' and from 77.0'-82.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.24.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 83.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

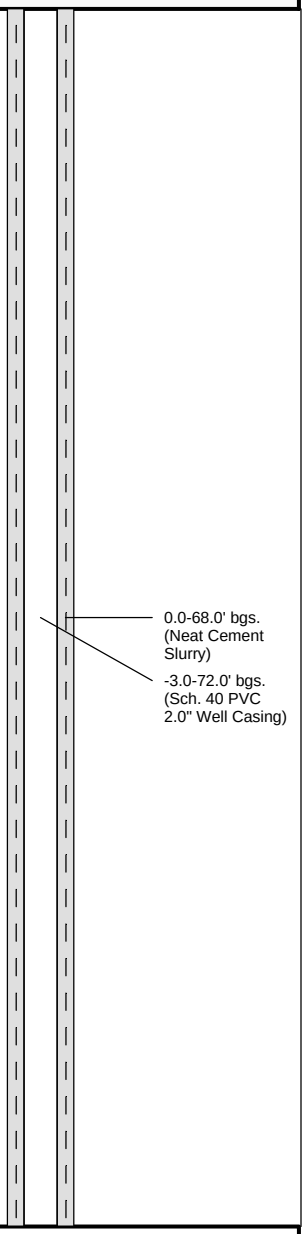
Well/Boring ID: **MW-13-30**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
				0.0			brown (10YR 7/4).
							(16.5'-17.5') CLAY and SILT, low plasticity, no dilatancy; some fine sand, subrounded; trace granules to large pebbles, subrounded; dry to moist; stiff; gray (10YR 5/1).
				0.0			(17.5'-25.0') SAND, very fine to coarse, subrounded; trace granules to small pebbles, subrounded; little to some silt; poorly sorted; dry to moist; light yellowish brown (10YR 6/4).
20 -20	4	17.0-27.0	9.0	0.0			
				0.0			
				0.0			
				0.0			NOTE: Fining upward. Small lense of coarse to very coarse sand from 20.5'-20.8' and 21.5'-21.9' bgs.
				0.0			
				0.0			
25 -25				0.0			(25.0'-29.0') SAND, fine to medium, subrounded; trace silt; well sorted; dry to moist; very pale brown (10YR 7/3).
				0.0			
				1.2			
				1.3			
				0.2			(29.0'-30.0') SAND, medium to very coarse, subrounded; trace to little granules to very large pebbles, subrounded; dry to moist; very pale brown (10YR 7/3).
30 -30	5	27.0-37.0	10.0	1.0			(30.0'-33.0') SAND, fine to medium, subrounded; trace to little silt; well sorted; dry; very pale brown (10YR 7/3).
				0.4			
				0.1			
				0.6			(33.0'-43.0') SAND, very fine to fine, subrounded; little silt; well sorted; dry; very pale brown (10YR 7/3). NOTE: (33.0'-33.5') Sand, very fine; brownish yellow (10YR 6/6).
				1.1			

Well/Boring Construction



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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 48.0'-52.0', 55.5'-62.0', at 72.0' and from 77.0'-82.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.24.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 83.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-30**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.8 0.4 0.2				
40 -40	6	37.0-43.0	6.0	NA 0.0 0.0 0.0				
				0.2			(43.0'-44.5') SILT, non-plastic, no dilatancy; little very fine to fine sand, subrounded; dry; very stiff; gray (10YR 5/1).	
45 -45	7	43.0-47.0	4.0	0.3 0.6 0.1			(44.5'-48.0') SAND, very fine to fine, subrounded; little silt; well sorted; dry; pale brown (10YR 6/3).	0.0-68.0' bgs. (Neat Cement Slurry) -3.0-72.0' bgs. (Sch. 40 PVC 2.0" Well Casing)
				0.1 0.0			(48.0'-52.0') SILT, non-plastic, slow to moderate dilatancy; and SAND, very fine to fine, subrounded; trace to little granules to large pebbles, subrounded; moist to wet; stiff; gray (10YR 5/1).	
50 -50	8	47.0-57.0	9.0	0.0 0.1 0.0 0.0			(52.0'-55.5') SAND, very fine to fine, subrounded; some silt; well sorted; dry to moist; gray (10YR 6/1).	

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 48.0'-52.0', 55.5'-62.0', at 72.0' and from 77.0'-82.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.24.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 83.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

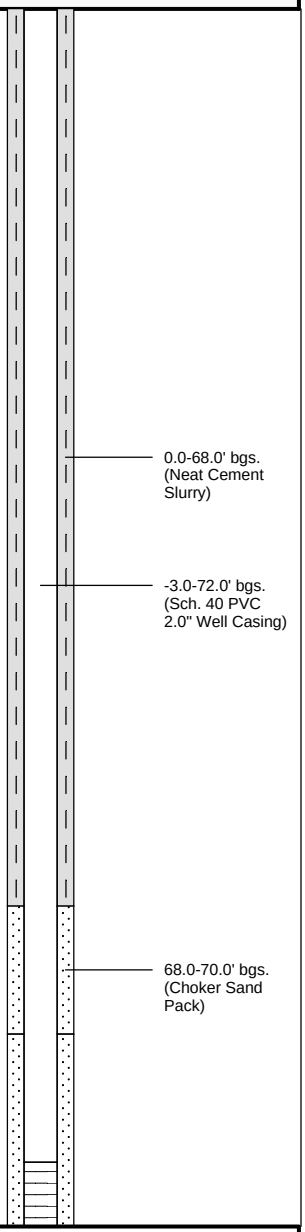
Well/Boring ID: **MW-13-30**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
55 -55				0.1 0.2 0.0			(55.5'-62.0') SILT, non-plastic, rapid dilatancy; some very fine sand, subrounded; oist to wet; stiff; gray (10YR 5/1).
60 -60	9	57.0-67.0	9.0	0.0 0.0 0.0 0.0 0.1			(62.0'-77.0') SILT, non-plsatic, slow dilatancy; and SAND, very fine to fine, subrounded; trace to little granules to medium pebbles, subrounded; moist; stiff; gray (10YR 5/1). NOTE: Moist to wet; rapid dilatancy; very fine laminations; at 72.0' bgs.
65 -65				0.0 0.0 0.0 0.1 0.0			
70 -70	10	67.0-77.0	9.0	0.0 0.0 0.0 0.0 0.0 0.0			

Well/Boring Construction



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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 48.0'-52.0', 55.5'-62.0', at 72.0' and from 77.0'-82.0' bgs.
No staining or odor observed.

Date Start/Finish: 4.24.2013
Drilling Company: Boart Longyear
Driller's Name: Scott Parks
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 83.0' bgs
Surface Elevation: NA

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-30**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
75 -75				0.0 0.1 0.0 0.0				70.0-78.0' bgs. (Sand Filter Pack - K&E #1) 72.0-77.0' bgs. (10-Slot Stainless Steel Screen)
80 -80	11	77.0-83.0	6.0	0.0 0.0 0.0 0.0 0.0 0.0			(77.0'-82.0') SAND, fine to very coarse, subrounded; some silt; little small to very large pebbles, subrounded; poorly sorted; moist to wet; gray (10YR 5/1). (82.0'-83.0') SAND, very fine to fine; little silt; well sorted; moist; pale brown (10YR 6/3). NOTE: Small fragments of weathered sandstone. End of boring at 83.0' bgs.	78.0-83.0' bgs. (Bentonite Pellets)
85 -85								
90 -90								

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Remarks: bgs = below ground surface

Hand auger from 0.0'-5.0' bgs.
Groundwater encountered from 48.0'-52.0', 55.5'-62.0', at 72.0' and from 77.0'-82.0' bgs.
No staining or odor observed.

Date Start: 7-25-2013
Date Finish: 7-25-2013
Drilling Company: STOCK
Driller's Name: Austin Goldsmith
Drilling Method: HSA
Sampling Method:
Rig Type: CME 750
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 20.0' bgs
Surface Elevation:

Descriptions By: R. Christensen

Well/Boring ID: **MW-13-31**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions:

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				0.0			(0.0-2.0') SAND and CLAY; fine, trace granules, subrounded; moist, brown (10YR 4/3).		Locking Well Cap; Backfill (0.0-2.0' bgs); 2" Sch 40 PVC riser (2.8' ags-5' bgs)
				0.0					
				0.0			(2.0-4.6') CLAY; low plasticity, some fine sand, trace granules to small pebbles; moist, medium stiff, brown (10YR 4/3).		Bentonite Plug (2.0-4.0' bgs)
				0.0					
				0.0			(4.6-10.0') SAND; fine to coarse, some granules to small pebbles, angular, some concrete and organic debris, poorly sorted; wet, very dark brown (10YR 2/2).		
5 / -5				0.0					Sand Pack (4.0-10.0' bgs); 2" 10 slot stainless steel screen (5-10' bgs)
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
10 / -10				0.0			(10.0-18.0') CLAY; high plasticity; moist, soft, gray (10YR 5/1).		
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 4.6' bgs.
No odor or staining observed.

Lithology transferred from PM log for SB-A16-HU-171installed on 11-09-2013

Date Start: 7-25-2013 **Date Finish:** 7-25-2013 **Drilling Company:** STOCK **Driller's Name:** Austin Goldsmith **Drilling Method:** HSA **Sampling Method:** **Rig Type:** CME 750 **Water Level Start (ft. bgs.):** **Water Level Finish (ft. btoc.):**	**Northing:** **Easting:** **Casing Elevation:** **Borehole Depth (ft. bgs.):** 20.0' bgs **Surface Elevation:** **Descriptions By:** R. Christensen	**Well/Boring ID: MW-13-31** **Client:** RACER **Location:** RACER Lansing Plant 3 2801 West Saginaw Lansing, MI 48909 **Weather Conditions:**

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
15 -15				0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(18.0-20.0) CLAY; high plasticity, trace fine sand, trace granules, angular; moist, medium stiff. Note: thin seam of moist fine sand at 18.0' bgs End of boring at 20.0' bgs.		
20 -20									
25 -25									

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Remarks: bgs = below ground surface
Groundwater encountered at 4.6' bgs.
No odor or staining observed.

Lithology transferred from PM log for SB-A16-HU-171installed on 11-09-2013

Date Start: 7-25-2013
Date Finish: 7-25-2013
Drilling Company: STOCK
Driller's Name: Austin Goldsmith
Drilling Method: HSA
Sampling Method:
Rig Type: CME 750
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 25.0' bgs
Surface Elevation:

Descriptions By: R. Christensen

Well/Boring ID: **MW-13-32**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 85, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0-1'	1.0	1.9	X		(0.0'-0.3') TOPSOIL/GRASS (0.3'-3.0') SAND, coarse to very coarse, subangular; little medium; little granules to small pebbles, subrounded; poorly sorted; dry; dark brown (10YR 4/1). NOTE: Fill		Locking Well Cap
	2	1-2'	1.0	1.1			NOTE: Trace glass at 1.0'-2.0' bgs.		Backfill (0.0-2.0' bgs)
	3	2-3'	1.0	1.1					2" Sch 40 PVC riser (2.8' ags-5' bgs)
	4	3-4'	1.0	0.2			(3.0'-10.0') SAND, fine to medium; little silt; little granules to small pebbles, subangular to angular; poorly sorted; wet; brown (10YR 4/3). NOTE: Trace metal.		Bentonite Plug (2.0-4.0' bgs)
	5	4-5'	1.0	0.9	X				
5 / -5	6	5-10'	0.1	NA			NOTE: Poor recovery from 5.0'-10.0' bgs.		Sand Pack (4.0-10.0' bgs) 2" 10 slot stainless steel screen (5-10' bgs)
10 / -10				0.0	X		(10.0'-14.0') CLAY, some silt, high plasticity, rapid dilatancy; wet; very soft; gray (10YR 5/1).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 3.0'-24.0' bgs.
No odor or staining observed.

Lithology transferred from SB-A16-HU181 installed on 7-10-2013

Date Start: 7-25-2013
Date Finish: 7-25-2013
Drilling Company: STOCK
Driller's Name: Austin Goldsmith
Drilling Method: HSA
Sampling Method:
Rig Type: CME 750
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 25.0' bgs
Surface Elevation:

Descriptions By: R. Christensen

Well/Boring ID: **MW-13-32**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 85, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	7	10-15'	4.1	0.0					
				0.3					
				0.2			(14.0'-15.0') SILT, rapid dilatancy, little clay, little very fine sand; trace granules to small pebbles, subangular; wet; very soft; dark gray (5Y 4/1).		
15 -15				4.3			(15.0'-18.9') CLAY, some silt, slow dilatancy, medium plasticity; medium to large pebbles, little very fine sand subangular to subrounded; wet, medium stiff; grayish brown (10YR 5/2).		
				0.8					
	8	15-20'	3.2	1.5					
				3.8					
				8.4			(18.9'-20.0') SAND, very fine to medium, little coarse, subangular; poorly sorted; trace silt; wet; gray (10YR 5/1).		
20 -20				0.3			(20.0'-24.0') CLAY, some silt, slow dilatancy, high plasticity; little very fine sand; trace small to medium pebbles, subangular; moist to wet; soft; grayish brown (10YR 5/2).		
				2.2					
	9	20-25'	4.0	4.2					
				1.2					
				1.5			(24.0'-25.0') CLAY, some silt, high plasticity, no dilatancy, little very fine sand, trace small pebbles, subangular to subrounded; moist, medium stiff, grayish brown (10YR 5/2).		
25 -25							End of boring at 25.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 3.0'-24.0' bgs.
No odor or staining observed.

Lithology transferred from SB-A16-HU181 installed on 7-10-2013

Date Start: 7-24-2013
Date Finish: 7-24-2013
Drilling Company: STOCK
Driller's Name: Austin Goldsmith
Drilling Method: HSA
Sampling Method:
Rig Type: CME 750
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 25.0' bgs
Surface Elevation:

Descriptions By: R. Christensen

Well/Boring ID: **MW-13-33**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 86, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0-1'	1.0	0.0			(0.0'-0.3') TOPSOIL/GRASS (0.3'-1.0') SAND; very fine to fine, little silt, trace clay; poorly sorted; dry, olive brown (2.5Y 4/5).		
	2	1-2'	1.0	0.0			(1.0'-2.0') SAND; fine to very coarse, liitle granules, trace small to medium pebbles, subangular to angular, poorly sorted; dry, dark brown (7.5YR 3/4).		
	3	2-3'	1.0	0.4			(2.0'-3.0') SAND; very fine to medium, little coarse to very coarse; trace small to medium pebbles, subangular; trace wood; poorly sorted; dry; very dark grayish brown (10YR 3/2).		
	4	3-4'	1.0	0.2			(3.0'-5.0') CLAY; low plasticity; some silt; little very fine sand; trace small pebbles, subangular; moist; no dilatancy; soft; grayish brown (2.5Y 5/2) with yellowish brown (10YR 5/6) mottling.		
	5	4-5'	1.0	0.5					
5 / -5				0.0			(5.0'-7.0') SILT; little clay, little very fine sand; trace granules to small pebbles, subangular to subrounded; dry; stiff; brown (10YR 4/3).		
				0.0					
	6	5-10'	2.4	0.0			(7.0'-10.1') CLAY; some silt, low plasticity, little very fine sand, trace medium pebbles, subrounded to subangular; dry, medium stiff, dark yellowish brown(10YR 4/6) with olive gray (5Y 4/2) mottling.		
				0.0					
				0.2					
10 / -10				0.0			(10.1'-12.0') SAND and SILT; very fine to fine, medium plasticity, rapid dilatancy; wet, soft, gray (10YR 3/1).		
				0.0					

Locking Well Cap
Backfill (0.0-2.0' bgs)
2" Sch 40 PVC riser (2.8' ags-12' bgs)
Bentonite Plug (2.0-11.0' bgs)

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Remarks: bgs = below ground surface
Groundwater encountered from 10.1'-15.0' and 17.0'-25.0' bgs.
No odor or staining observed.

Lithology transferred from SB-A16-IL168 installed on 7-10-2013

Date Start: 7-24-2013
Date Finish: 7-24-2013
Drilling Company: STOCK
Driller's Name: Austin Goldsmith
Drilling Method: HSA
Sampling Method:
Rig Type: CME 750
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 25.0' bgs
Surface Elevation:

Descriptions By: R. Christensen

Well/Boring ID: **MW-13-33**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 86, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	7	10-15'	4.0	0.6 0.0 0.0			(12.0'-15.0') SILT; little clay, medium plasticity, rapid dilatancy, little very fine sand; wet, soft, gray (10YR 5/1). NOTE: Sand and silt seam, medium to very coarse; wet; from 14.5'-14.7' bgs.		Sand Pack (11.0-17.0' bgs) 2" 10 slot stainless steel screen (12-17' bgs)
15 -15				0.0 0.0			(15.0'-17.0') SILT and CLAY; no dilatancy, trace granules to small pebbles, subangular; moist, medium stiff, gray (10YR 5/2).		
	8	15-20'	3.9	0.0 0.0 0.0			(17.0'-19.5') SAND; very fine to coarse, some silt; rapid dilatancy; trace granules to small pebbles, subrounded to subangular; wet; poorly sorted; gray (10YR 5/1).		
20 -20				0.0 0.0			(19.5'-22.5') CLAY; some silt, little very fine sand, trace granules to small pebbles, subrounded to subangular, wet; gray (10YR 5/1).		
	9	20-25'	4.0	0.0 0.0 0.0			(22.5'-25.0') CLAY and SILT; rapid dilatancy, trace small to medium pebbles, subrounded to subangular; moist to wet, medium stiff, gray (10YR 5/1).		
25 -25							End of boring at 25.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 10.1'-15.0' and 17.0'-25.0' bgs.
No odor or staining observed.

Lithology transferred from SB-A16-IL168 installed on 7-10-2013

Date Start:
Date Finish:
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: Sonic/Hand Auger
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 79.0' bgs
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-34**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions:

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0-0.3') ASPHALT. NOTE: Lithology 0.0'-60.0' bgs logged at adjacent boring VAP-P3-IS63.		J-plug
							(0.3-2.0') CLAY, low plasticity; some medium sand; little granules, subrounded to subangular; trace small to large pebbles, subangular; dark yellowish brown (10YR 4/6).		
							(2.0-5.0') SAND, fine to medium, trace granules to small pebbles, subrounded to subangular; little silt; dry to moist; yellowish brown (10YR 5/4).		
5 / -5							(5.0-16.0') CLAY, some silt, low plasticity; little very fine to fine sand, trace granules to large pebbles, subrounded to subangular; medium stiff; moist; dark gray (10YR 4/1).		
10 / -10									

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Remarks: bgs = below ground surface

Lithology 0.0'-60.0' bgs logged at adjacent boring VAP-P3-IS63.
Sonic/Hand Auger.
Groundwater encountered from 60.0'-73.0' bgs.
No staining or odor observed.

Date Start:
Date Finish:
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: Sonic/Hand Auger
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 79.0' bgs
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-34**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions:

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
15 -15									
							(16.0-20.0') PEAT; some roots; moist; very dark brown.		
20 -20							(20.0-26.0') SILT, some clay, medium plasticity, slow dilatancy; very soft; moist; olive gray (5Y 4/2). NOTE: Trace organics.		
25 -25							NOTE: High plasticity; color change to gray (10YR 5/1) at 25.0' bgs.		
							(26.0-27.0') PEAT and ORGANICS (roots, wood); moist; dark brown.		
							(27.0-38.5') SILT, some clay, high plasticity, rapid dilatancy; very soft; moist; dark gray (10YR 5/1).		

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Remarks: bgs = below ground surface

Lithology 0.0'-60.0' bgs logged at adjacent boring VAP-P3-IS63.
Sonic/Hand Auger.
Groundwater encountered from 60.0'-73.0' bgs.
No staining or odor observed.

Date Start:
Date Finish:
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: Sonic/Hand Auger
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 79.0' bgs
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-34**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions:

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
30 -30							NOTE: Wet at 36.0' bgs.		2" Sch 40 PVC (3' ags-74' bgs)
35 -35							NOTE: SAND, fine to medium; poorly sorted; little silt; wet from 38.0-38.5' bgs.		Portland Cement (0-72.5' bgs)
40 -40							(38.5-42.0') SAND, very fine to fine; some silt; rapid dilatancy; poorly sorted; wet; light yellowish brown (10YR 6/4).		
							(42.0-46.0') CLAY, some silt, low to medium plasticity; trace granules to medium pebbles, subrounded to subangular; little very fine sand; medium stiff; moist; gray (10YR 5/1). NOTE: Till.		

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Remarks: bgs = below ground surface

Lithology 0.0'-60.0' bgs logged at adjacent boring VAP-P3-IS63.
Sonic/Hand Auger.
Groundwater encountered from 60.0'-73.0' bgs.
No staining or odor observed.

Date Start:
Date Finish:
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: Sonic/Hand Auger
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 79.0' bgs
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-34**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions:

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
45 -45									
							(46.0-56.0') SILT, little clay, low plasticity, slow dilatancy; some very fine sand; trace granules to small pebbles, subrounded to subangular; soft; moist; grayish brown (10YR 5/2).		
50 -50							NOTE: Medium stiff at 51.0' bgs.		
55 -55							(56.0-60.0') SILT, little clay, low plasticity; and SAND, very fine, trace granules to medium pebbles, subrounded to subangular; poorly sorted; medium stiff; moist; grayish brown (10YR 5/2). NOTE: Till.		

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Remarks: bgs = below ground surface

Lithology 0.0'-60.0' bgs logged at adjacent boring VAP-P3-IS63.
Sonic/Hand Auger.
Groundwater encountered from 60.0'-73.0' bgs.
No staining or odor observed.

Date Start:
Date Finish:
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: Sonic/Hand Auger
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 79.0' bgs
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-34**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions:

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(60.0'-72.0') SAND, fine to medium; trace granules, subrounded; little to some silt; well sorted; wet; brown (10YR 5/3).		
				0.0					
				0.0					
				0.0					
	1	60.0-72.0	11.0	0.0					
65 -65				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.1					
70 -70				0.0					
				0.0					
				0.0			(72.0'-73.0') SAND, medium to coarse; trace granules, subrounded; little silt; well sorted; moist to wet; brown (10YR 5/3).		
				0.0			(73.0'-74.0') CLAY, some silt, medium to high plasticity, non to low dilatancy; little very fine sand; trace granules to small pebbles, subrounded; medium stiff; moist; gray (10YR 5/1).		
	2	72.0-77.0	5.0	0.0			(74.0'-79.0') BEDROCK/SANDSTONE, weathered; and SAND, very fine to fine, subrounded; light gray (10YR 7/2).		
75 -75				0.0					
				0.0					

Bentonite Pellets (72.5-73.5' bgs)

Remarks: bgs = below ground surface

Lithology 0.0'-60.0' bgs logged at adjacent boring VAP-P3-IS63.
Sonic/Hand Auger.
Groundwater encountered from 60.0'-73.0' bgs.
No staining or odor observed.

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Date Start:
Date Finish:
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: Sonic/Hand Auger
Sampling Method: Sonic
Rig Type: Sonic
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 79.0' bgs
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **MW-13-34**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions:

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					Filter Pack (73.5-79' bgs); 2" Stainless Steel 10 Slot Well Screen (74'-79' bgs)
	3	77.0-79.0	2.0	0.0 0.0					
80 -80							End of boring at 79.0' bgs.		
85 -85									
90 -90									

Remarks: bgs = below ground surface

Lithology 0.0'-60.0' bgs logged at adjacent boring VAP-P3-IS63.
Sonic/Hand Auger.
Groundwater encountered from 60.0'-73.0' bgs.
No staining or odor observed.

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Date Start: 9/13/2013
Date Finish: 9/13/2013
Drilling Company: Stock
Driller's Name: Austin
Drilling Method: Hand Auger/2" Split Spoon
Sampling Method: Hand Auger/Continuous
Rig Type: 2" Split Spoon
Water Level Start (ft. bgs.): 10.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 24.0' bgs.
Surface Elevation:

Descriptions By: J. Ness

Well/Boring ID: MW-13-35
Client: RACER
Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 60's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				0.0			(0.0'-0.3') GRASS/TOPSOIL.		0.0-1.0' bgs. (Concrete Pad)
				0.0			(0.3'-2.0') SAND, fine to medium, round; and CLAY, low to medium plasticity, no dilatancy; trace granules to small pebbles, round to subround; poorly sorted; dry; black (10YR 2/1). NOTE: FILL.		
	1	1.0-6.0	6.0	0.0			(2.0'-5.0') CLAY, medium to high plasticity, no dilatancy; little fine to medium sand, round; trace granules to small pebbles, subround; dry; medium stiff to soft; dark yellow brown (10YR 3/4). NOTE: Concrete debris from 2.0'-3.0' bgs.		
				0.0			NOTE: Moist to wet at 3.0' bgs.		
				0.0					
5 / -5				0.0			(5.0'-7.5') CLAY, high plasticity, no dilatancy; trace fine to medium sand, round; trace granules, round to subround; moist; very soft; black (7.5YR 2.5/1).		
	2	6.0-8.0	2.0	0.0					
				0.0			(7.5'-11.2') CLAY, high plasticity, no dilatancy; trace fine sand; moist; very soft; dark gray (2.5Y 4/1).		
	3	8.0-10.0	2.0	0.0					
10 / -10				0.0			NOTE: Wet at 10.5' bgs.	▼	
	4	10.0-12.0	1.5	0.0			(11.2'-12.5') SAND, very fine to medium, round; trace small pebbles, subround; little silt; poorly sorted; wet; brown (10YR 5/3).		1.0-23.0' bgs. (Bentonite)
	5	12.0-14.0	1.7	0.0			(12.5'-23.0') CLAY, high plasticity, no dilatancy; little small to medium pebbles, subround to subangular; trace fine to medium sand, round; moist; soft; dark gray brown (10YR 4/2).		
				0.0					
15 / -15	6	14.0-16.0	0.7	0.0			NOTE: Wet at 15.5' bgs.		
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered at 3.0', 10.5', from 11.2'-12.5', at 15.5' and from 23.0'-29.5' bgs.
No odor or staining observed.

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Date Start: 9/13/2013
Date Finish: 9/13/2013
Drilling Company: Stock
Driller's Name: Austin
Drilling Method: Hand Auger/2" Split Spoon
Sampling Method: Hand Auger/Continuous
Rig Type: 2" Split Spoon
Water Level Start (ft. bgs.): 10.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 24.0' bgs.
Surface Elevation:

Descriptions By: J. Ness

Well/Boring ID: MW-13-35
Client: RACER
Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 60's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	7	16.0-18.0	1.4	0.0			NOTE: Moist at 17.0' bgs.		
	8	18.0-20.0	1.4	0.0 0.0					
20 -20	9	20.0-22.0	1.7	0.0 0.0					
	10	22.0-24.0	1.6	0.0 0.0			(23.0'-29.5') SAND, very fine to fine, round; trace medium sand, round; trace silt; poorly sorted; wet; grayish brown (10YR 5/2).		
25 -25	11	24.0-26.0	1.4	0.0 0.0					23.0-30.0' bgs. (Sand Filter Pack) 25.0-30.0' bgs. (Well Screen)
	12	26.0-28.0	1.5	0.0 0.0					
	13	28.0-30.0	1.6	0.0 0.0			(29.5'-30.0') CLAY, high plasticity, no dilatancy; little small to medium pebbles, subround to subangular; trace fine to medium sand, round; moist; soft; dark gray brown (10YR 4/2).		
30 -30							End of boring at 30.0' bgs.		
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered at 3.0', 10.5', from 11.2'-12.5', at 15.5' and from 23.0'-29.5' bgs.
No odor or staining observed.

Date Start: 9/12/2013
Date Finish: 9/12/2013
Drilling Company: Stock
Driller's Name: Austin
Drilling Method: Hand Auger/2" Split Spoon
Sampling Method: Hand Auger/Continuous
Rig Type: 2" Split Spoon
Water Level Start (ft. bgs.): 5.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 24.0' bgs
Surface Elevation:

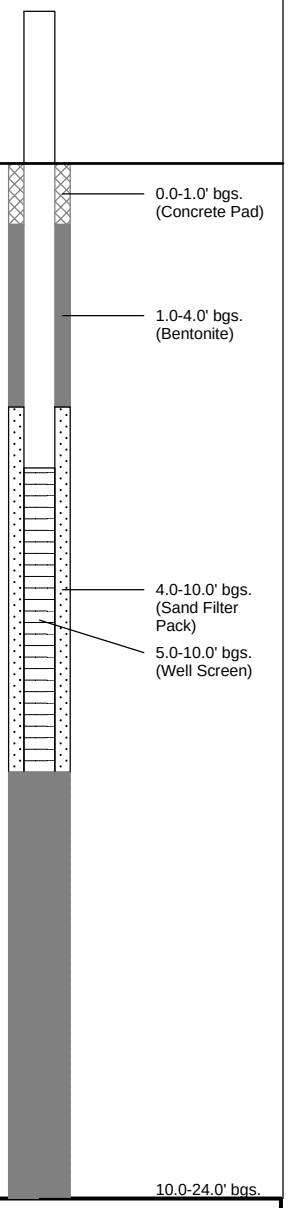
Descriptions By: J. Ness

Well/Boring ID: MW-13-36
Client: RACER
Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 70's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)
0 / 0							(0.0'-0.4') GRASS/TOPSOIL.	
	1	1.0-6.0	6.0	0.0 0.0 0.0 0.0 0.0			(0.4'-4.0') CLAY, medium to high plasticity, no dilatancy; some fine to medium sand, round to subround; trace very coarse sand, round to subround; trace medium to large pebbles, subround to subangular; medium stiff to soft; dark brown (10YR 3/3). NOTE: Moist at 3.0' bgs.	
5 / -5							(4.0'-10.0') CLAY, high plasticity, no dilatancy; little medium to coarse sand, trace very coarse sand to granules, round to subround; trace small to medium pebbles, subround to subangular; moist; very soft; dark brown (10 YR 3/3). NOTE: Wet at 5.0' bgs.	▼
	2	6.0-8.0	2.0	0.0 0.0				
	3	8.0-10.0	2.0	0.0 0.0				
10 / -10	4	10.0-12.0	2.0	0.0 0.0			(10.0'-12.0') CLAY, high plasticity, no dilatancy; little fine to medium sand, round; little vey coarse sand to granules, round to subround; moist; stiff to medium stiff; brown (10YR 5/3).	
	5	12.0-14.0	2.0	0.0 0.0			(12.0'-24.0') CLAY, high plasticity, no dilatancy; and SAND, very fine to fine, round; trace coarse to very coarse sand, round to subround; trace granules, subround; wet; very soft; dark gray brown (10YR 4/2). NOTE: Moist at 24.0' bgs.	
15 / -15	6	14.0-16.0	2.0	0.0 0.0			NOTE: Little small to large pebbles, subround to subangular from 15.0'-16.0' bgs.	
				0.0				

Well/Boring Construction



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Remarks: bgs = below ground surface
Groundwater encountered at 5.0' and from 12.0'-24.0' bgs.
No odor or staining observed.

Date Start: 9/12/2013
Date Finish: 9/12/2013
Drilling Company: Stock
Driller's Name: Austin
Drilling Method: Hand Auger/2" Split Spoon
Sampling Method: Hand Auger/Continuous
Rig Type: 2" Split Spoon
Water Level Start (ft. bgs.): 5.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 24.0' bgs
Surface Elevation:

Descriptions By: J. Ness

Well/Boring ID: **MW-13-36**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 70's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	7	16.0-18.0	2.0	0.0					(Bentonite)
	8	18.0-20.0	2.0	0.0 0.0					
20 -20	9	20.0-22.0	2.0	0.0 0.0					
	10	22.0-24.0	2.0	0.0 0.0					
							End of boring at 24.0' bgs.		
25 -25									
30 -30									
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered at 5.0' and from 12.0'-24.0' bgs.
No odor or staining observed.

Date Start: 10/4/2013
Date Finish: 10/4/2013
Drilling Company: Stock
Driller's Name: Jake / Craig
Drilling Method: Hollow Stem Auger
Sampling Method: 2' Splitspoon
Rig Type: CME L/C 55 Low Clearance Drill
Water Level Start (ft. bgs.): 4.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 10.5' bgs.
Surface Elevation:

Descriptions By: J. Ness

Well/Boring ID: **MW-13-36R**

Client: RACER

Location: RACER Lansing Plant 6
401 N. Verlinden St.
Lansing, MI 48909

Weather Conditions: Overcast 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-5.0	5.0	1.5 0.4 1.5 0.4 0.0			(0.0'-2.0') SAND, fine to medium, round to subround; little granules to small pebbles, subround; trace medium pebbles, subround; poorly sorted; dry; yellowish brown (10YR 5/4). NOTE: Fill. (2.0'-5.0') SAND, fine to medium, round; trace granules to small pebbles, round to subround; trace clay; poorly sorted; dry; yellowish brown (10YR 5/4). NOTE: Trace small cobbles at 2.5' bgs. NOTE: Moist at 3.0' bgs. NOTE: Wet at 4.5' bgs.		Protective Casing. 0.0-0.5' bgs. (Concrete). 2.0-4.5' bgs. (Bentonite).
5 / -5	2	5.0-7.0	1.2	0.0 0.0			(5.0'-6.0') CLAY, high plasticity, no dilatancy; little fine sand, round; trace medium pebbles, subround to subangular; medium stiff to soft; light yellow brown (10YR 6/4). (6.0'- 9.5') PEBBLES, small, subround to subangular; and SAND, medium to very coarse, round to subround; trace medium to large pebbles, subround to subangular; poorly sorted; wet; dark gray brown (10YR 4/2).		
	3	7.0-9.0	0.8	0.0 0.0					4.5-10.5' bgs. (Filter Pack). 5.5-10.5' bgs. (10-Slot Stainless Steel Well Screen).
	4	9.0-9.5	0.5						
10 / -10	5	9.5-10.5	1.0	0.0			(9.5'-10.0') SAND, medium to very coarse, round to subround; little fine sand, round; trace granules, round to subround; poorly sorted; wet; brown (10YR 5/3). (10.0'-10.5') SAND, fine to coarse, round to subround; little granules to medium pebbles, subround to subangular; trace large pebbles, subround; trace silt; poorly sorted; wet; brown (10YR 5/3). NOTE: Hit refusal at 10.5' bgs. End of boring 10.5' bgs - REFUSAL.		
15 / -15									

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Remarks: bgs = below ground surface

Groundwater encountered at 4.5' and from 6.0'-10.5' bgs.
No staining or odor observed.
Refusal at 10.5' bgs.

Date Start: 10/17/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-37**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									Protective Casing
							(0.0'-0.8') CONCRETE.		
				0.0			(0.8'-3.0') SAND, fine, subround; well sorted; wet; brown (10YR 4/3).		
	1	0.0-7.0	7.0	0.3			(3.0'-5.0') SILT, little clay, low plasticity, slow dilatancy; trace fine to medium sand, subround; soft; moist; brown (10YR 5/3).		
5 / -5				0.0			(5.0'-10.0') SILT, little clay, non-plastic to low plasticity, rapid dilatancy; medium stiff; brown (10YR 5/3).		
				0.2					
				0.0					
				0.3					
10 / -10							(10.0'-17.0') CLAY, some silt, low to medium plasticity, slow dilatancy; trace sand very fine to coarse, trace small to large pebbles, subround; moist; stiff; dark brown (10YR 2/2) with gray (10YR 5/1) mottling.		
				2.1					
	2	7.0-17.0	10.0						
				1.1					
15 / -15				0.9					
				1.3					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.8'-3.0', 28.0'-33.0', 66.0'-72.0' and 92.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/17/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-37**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.8			(17.0'-26.0') SILT, some clay, medium plasticity,; trace small to medium pebbles, subround; moist; medium stiff; gray (10YR 5/1).		
				0.0					
20 -20									
				0.3					
	3	17.0-27.0	10.0						
				0.0					
25 -25									
				0.0					
				0.0			(26.0'-27.0') SILT, non-plastic, dry, stiff; gray (10YR 5/1).		
				0.1			(27.0'-28.0') SAND, fine to medium, subround; well sorted; moist; loose; very pale brown (10YR 5/1).		
				0.0			(28.0'-30.0') SAND, fine to coarse, subround; little silt; poorly sorted; wet; brown (10YR 5/3).		
30 -30									
				0.0			(30.0'-33.0') SAND, fine, subround; well sorted; wet; light gray (10YR 7/1).		
	4	27.0-37.0	10.0						
				0.0			(33.0'-37.0') SILT, little clay, non-plastic to low plasticity; some sand; trace small to large pebbles, subround; medium stiff; moist; light gray (10YR 7/1).		
35 -35									
				0.2					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.8'-3.0', 28.0'-33.0', 66.0'-72.0' and 92.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/17/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-37**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40				0.0			(37.0'-48.0') SAND, very fine to fine, subround; trace silt; well sorted; moist; medium dense; light gray (10YR 7/1).		0.0-97.0' bgs. (4.0" Steel Casing)
				0.0					
				0.2					
	5	37.0-47.0	10.0						
				0.0					
45 -45				0.0					
				0.1					
				0.0			(48.0'-58.0') SILT, some clay; low to medium plasticity; trace very fine to coarse sand, trace small to large pebbles, subround; moist; medium stiff; light gray (10YR 7/1).		0.0-97.0' bgs. (Concrete).
				0.0					
50 -50				0.0					
	6	47.0-57.0	10.0						
				0.0					
55 -55				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.8'-3.0', 28.0'-33.0', 66.0'-72.0' and 92.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/17/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-37**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(58.0'-58.5') SAND, fine to medium, subround; well sorted; moist; light brown (10YR 6/3).		
				0.0			(58.5'-61.0') CLAY, some silt, medium plasticity, no dilatancy; trace fine sand; stiff; light gray (10YR 7/1).		
60 -60				0.0			(61.0'-62.0') SAND, fine, subround; well sorted; moist; light gray (10YR 7/1).		
	7	57.0-67.0	10.0				(62.0'-66.0') SILT, trace clay, non-plastic, rapid dilatancy; moist; medium stiff; grayish brown (10YR 5/2).		
				0.0					
65 -65				0.0					
				0.0			(66.0'-72.0') SAND, very fine to medium, subround; trace silt; poorly sorted; wet; grayish brown (10YR 5/2).		
				0.2					
	8	67.0-72.0	5.0	0.1					
70 -70				1.1					
				0.8			(72.0'-88.0') SILT, little clay, low plasticity, rapid dilatancy; trace fine to coarse sand, trace small to medium pebbles; moist; medium stiff; gray (10YR 6/1).		
	9	72.0-77.0	5.0						
75 -75				0.0					
				1.1					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.8'-3.0', 28.0'-33.0', 66.0'-72.0' and 92.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/17/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-37**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	77.0-82.0	5.0	0.0 0.0 0.0					
85 -85	11	82.0-87.0	5.0	0.0 0.0 0.0					
90 -90	12	87.0-92.0	5.0	0.0 0.0 0.0			(88.0'-91.0') SHALE, weathered, thin laminations, partially unconsolidated with clay and silt; trace sand; low plasticity; moist; soft; gray (2.5Y 5/0). (91.0'-92.0') SANDSTONE, fine grained; dense; light brownish gray (2.5Y 6/2).		
95 -95	13	92.0-97.0	5.0	0.0 0.0 0.0			(92.0'-96.0') SHALE, weathered, thin laminations; moist to wet; gray (2.5Y 5/0). (96.0'-112.0') SANDSTONE, fine grained; dense; wet; light brownish gray (2.5Y 6/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 0.8'-3.0', 28.0'-33.0', 66.0'-72.0' and 92.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/17/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-37**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
100-100	14	97.0-102.0	5.0	0.0 0.0					
105-105	15	102.0-107.0	5.0						97.0-112.0' bgs. (3.0" Open Hole)
110-110	16	107.0-112.0	5.0						
							End of boring at 112.0' bgs.		
115-115									

Remarks: bgs = below ground surface
Groundwater encountered from 0.8'-3.0', 28.0'-33.0', 66.0'-72.0' and 92.0'-112.0' bgs.
No odor or staining observed.

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Date Start: 10/15/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Jim
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 124.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-38**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
									Protective Casing
0 / 0							(0.0'-0.8') CONCRETE.		
				0.0			(0.8'-2.0') SILT, little clay, non-plastic to low plasticity, no dilatancy; trace very fine to medium sand, subround; moist; soft; brown (10YR 5/3).		
	1	0.0-7.0	7.0				(2.0'-5.0') SILT, little clay, non-plastic, slow to rapid dilatancy; trace very fine to coarse sand, trace small pebbles; wet; medium stiff; brown (10YR 5/3).		
				0.0					
5 / -5				0.0			(5.0'-10.0') SILT and CLAY, low plasticity, no dilatancy; trace very fine to coarse sand, trace small pebbles; moist; stiff; light yellowish brown (10YR 6/4).		
				0.0					
				0.0					
				0.0					
10 / -10	2	7.0-17.0	10.0				(10.0'-12.0') SILT, some clay, low to medium plasticity, slow dilatancy; little very fine to coarse sand, trace pebbles, small to medium; moist; stiff; pale brown (10YR 6/3).		
				0.0					
							(12.'0-17.0') CLAY, some silt, low to medium plasticity, no dilatancy; trace very fine to coarse sand, trace pebbles, small to medium, subround; moist; stiff; gray (10YR 5/1),		
				0.0					
15 / -15				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-5.0', 22.5'-23.0', 24.5'-27.0' and at 77.0' bgs.
No odor or staining observed.

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Date Start: 10/15/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Jim
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 124.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-38**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(17.0'-20.0') SILT, little clay, non-plastic, rapid dilatancy; moist; medium stiff; gray (10YR 5/1),		
				0.0					
20 -20	3	17.0-27.0	10.0				(20.0'-22.0') CLAY, trace silt, high plasticity, no dilatancy; moist; soft; gray (10YR 5/1).		
				0.4			(22.0'-22.5') SILT, some clay; trace very fine to coarse sand, trace small to medium pebbles, subangular to subround; moist; stiff; gray (10YR 5/1).		
				0.5			(22.5'-23.0') SAND, fine, trace very fine sand, subround; trace silt; well sorted; wet; loose; very pale brown (10YR 7/4).		
							(23.0'-24.0') CLAY, little silt, high plasticity, no dilatancy; trace very fine to coarse sand; moist; gray (10YR 5/1).		
25 -25				0.3			(24.0'-24.5') SAND, medium, subround; well sorted; moist; loose; very pale brown (10YR 7/4).		
							(24.5'-27.0') SAND, very fine to fine, subround; some silt; trace clay; poorly sorted; wet; loose; olive yellow (2.5Y 6/8).		
				0.0					
				0.9			(27.0'-29.0') CLAY, some silt, medium plasticity, no dilatancy; moist; very soft; gray (10YR 6/1).		
				2.4			(29.0'-29.5') SAND, fine, subround; little silt; poorly sorted; moist; medium dense; brownish yellow (10YR 6/8).		
30 -30	4	27.0-37.0	10.0				(29.5'-41.0') SAND, very fine to fine, subround; trace silt; well sorted moist; medium dense; light gray (10YR 7/1).		
				3.1					
				2.8					
35 -35				3.0					
				0.9					

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Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-5.0', 22.5'-23.0', 24.5'-27.0' and at 77.0' bgs.
No odor or staining observed.

Date Start: 10/15/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Jim
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 124.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-38**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	5	37.0-47.0	10.0	0.8					
				0.3					
				0.0			(41.0'-43.0') SAND, fine, subround; well sorted; moist; loose; light gray (10YR 7/1).		
				0.0			(43.0'-44.0') SILT, some clay, low plasticity, slow dilatancy; little very fine to coarse sand; moist; medium stiff; light gray (10YR 7/1).		
45 -45				0.0			(44.0'-57.0') SAND, very fine to medium, subround; some silt; poorly sorted; moist; loose; light gray (10YR 7/1).		
				0.0					
				0.9					
				2.2					
50 -50	6	47.0-57.0	10.0	1.1					
				2.3					0.0-107.0' bgs. (4.0" Steel Casing)
55 -55				0.0					0.0-107.0' bgs. (Concrete)
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-5.0', 22.5'-23.0', 24.5'-27.0' and at 77.0' bgs.
No odor or staining observed.

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Date Start: 10/15/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Jim
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 124.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-38**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(57.0'-58.0') SILT, trace clay, non-plastic, rapid dilatancy; little very fine sand; moist; medium stiff; light brown (10YR 6/3).		
				0.0			(58.0'-60.0') SAND, very fine, subround; some silt; poorly sorted; moist; dense; light gray (10YR 7/1).		
60 -60	7	57.0-67.0	10.0						
				0.0			(60.0'-65.0') SILT, trace clay, non-plastic, rapid dilatancy; moist; medium stiff; grayish brown (10YR 5/2).		
				0.0					
65 -65				0.0			(65.0'-67.0') SAND, very fine, subround; some silt; poorly sorted; moist grayish brown (10YR 5/2).		
				0.0					
				0.0			(67.0'-73.0') SILT, trace clay, non-plastic; rapid dilatancy; dry; stiff; brown (10YR 5/3).		
				0.0					
70 -70	8	67.0-72.0	5.0						
				0.0					
				0.0			(73.0'-77.0') SILT, little clay, low to medium plasticity, no dilatancy; moist; medium stiff; gray (1YR 6/1).		
	9	72.0-77.0	5.0						
75 -75				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-5.0', 22.5'-23.0', 24.5'-27.0' and at 77.0' bgs.
No odor or staining observed.

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Date Start: 10/15/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Jim
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 124.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-38**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	77.0-82.0	5.0	0.0 0.0 0.0			(77.0'-82.0') SANDSTONE, weathered; fine grained; light gray (10YR 7/1). NOTE: Wet at 77.0'.		
85 -85	11	82.0-87.0	5.0	0.1 0.0 0.0			(82.0'-88.0') SHALE, weathered thin laminations; moist; gray (2.5Y 5/0); trace sandstone, weathered fine grained; light brownish gray (2.5Y 6/2); some silt and clay, low plasticity, no dilatancy; moist; gray (2.5Y 5/0).		
90 -90	12	87.0-92.0	5.0	0.0 0.3 0.0			(88.0'-102.5') SHALE, weathered thin laminations; moist; gray (2.5Y 5/0).		
95 -95	13	92.0-97.0	5.0	0.0 0.1 0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-5.0', 22.5'-23.0', 24.5'-27.0' and at 77.0' bgs.
No odor or staining observed.

Date Start: 10/15/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Jim
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 124.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-38**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
100-100	14	97.0-102.0	5.0	0.0 0.0 0.0					
	15	102.0-107.0	5.0	0.0 0.0 0.0			(102.5'-124.0') SANDSTONE, fine grained; dense; light gray (10YR 7/1).		
105-105									
110-110	16	107.0-117.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0					107.0-124.0' bgs. (3.0" Open Hole)
115-115									

Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-5.0', 22.5'-23.0', 24.5'-27.0' and at 77.0' bgs.
No odor or staining observed.

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Date Start: 10/15/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Jim
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 124.0
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-38**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
120-120	17	117.0-124.0	7.0	0.0 0.0					
125-125							End of boring at 124.0' bgs.		
130-130									
135-135									

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Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-5.0', 22.5'-23.0', 24.5'-27.0' and at 77.0' bgs.
No odor or staining observed.

Date Start: 10/14/2013 **Date Finish:** 10/21/2013 **Drilling Company:** Cascade **Driller's Name:** Mike, Joel, Dan **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 110.0' bgs **Surface Elevation:** **Descriptions By:** T.Darmon	**Well/Boring ID:** **MW-13-39** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-7.0	7.0	0.0			(0.0'-4.0') SILT, non-plastic, low dilatancy; and SAND, very fine to coarse, little granules, subround; moist; medium; stiff; yellowish brown (10YR 5/4). NOTE: Fill.		
				0.0			(4.0'-6.0') CLAY, little silt, medium plasticity, no dilatancy; trace fine sand; moist; stiff; yellowish brown (10YR 5/4).		
5 / -5				0.0			(6.0'-7.0') SAND, very fine to coarse, subround; some silt; poorly sorted; moist; loose; yellowish brown (10YR 5/4).		
	2	7.0-17.0	10.0	0.0			(7.0'-10.0') SILT, trace clay, non-plastic, slow dilatancy; trace very fine sand to small pebbles, subround; moist; stiff; brown (10YR 5/3).		
10 / -10				0.0			(10.0'-12.0') SAND, fine, subround; trace silt; well sorted; wet; loose; brown (10YR 5/3).		
				0.0			(12.0'-16.0') SILT, little clay, non-plastic, slow dilatancy; some very fine to coarse sand; wet; medium stiff; brown (10YR 5/3).		
15 / -15				0.0			(16.0'-17.0') CLAY, little silt, high plasticity, no dilatancy; trace very fine to coarse sand; trace small pebbles; medium stiff; moist; brown (10YR 5/3).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-16.0', 17.0'-20.0', 77.0'-81.0' and 89.0'-100.0' bgs.
No odor or staining observed.
No Recovery - drilling rod broke in ground. Abandon well location.

Date Start: 10/14/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.8			(17.0'-20.0') SAND, very fine to fine, subround; trace silt; well sorted; wet; yellowish brown (10YR 5/6).		
				1.5					
20 -20	3	17.0-27.0	10.0				(20.0'-21.0') SAND, very fine, subround; some silt; poorly sorted; moist; loose; light yellowish brown (10YR 6/4).		
				0.0			(21.0'-24.0') SILT, trace clay, non-plastic, rapid dilatancy; trace very fine to coarse sand, trace granules and small pebbles, subround; moist; medium stiff; light gray (10YR 7/1).		
				0.0					
							(24.0'-31.0') CLAY, some silt, medium plasticity, no dilatancy; trace very fine to coarse sand, trace granules and small pebbles; moist; soft; brown (10YR 5/3).		
25 -25				0.0					
				0.0					
				3.9					
				1.1					
30 -30	4	27.0-37.0	10.0						
				19.2			(31.0'-33.0') SAND, very fine to coarse, subround; some silt; trace clay; poorly sorted; moist; brown (10YR 5/3).		
				15.4			(33.0'-38.0') SAND, very fine to fine, subround; trace silt; well sorted; moist; brown (10YR 5/3).		
35 -35				10.8					
				7.2					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-16.0', 17.0'-20.0', 77.0'-81.0' and 89.0'-100.0' bgs.
No odor or staining observed.
No Recovery - drilling rod broke in ground. Abandon well location.

Date Start: 10/14/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				11.8					
							(38.0'-45.0') SAND, very fine to fine, subround; trace silt; well sorted; moist; light gray (10YR 7/1).		
				9.2					
40 -40	5	37.0-47.0	10.0						
				9.2					
				10.1					
45 -45				8.2			(45.0'-47.0') SILT, non-plastic, rapid dilatancy; and SAND, very fine; moist; stiff; light gray (10YR 7/1).		
				7.8					
				0.3			(47.0'-53.0') SILT, trace clay, non-plastic, slow to rapid dilatancy; little very fine to coarse sand, trace small to large pebbles, subround, moist; stiff; grayish brown (10YR 5/2).		
				0.8					
50 -50	6	47.0-57.0	10.0						0.0-100.0' bgs. (Concrete)
				0.2					
				0.0			(53.0'-55.0') SILT, trace clay, non-plastic, slow dilatancy; little very fine to coarse sand, trace small to large pebbles, subround; moist; hard; grayish brown (10YR 5/2).		
55 -55				0.0			(55.0'-60.0') SILT, trace clay, non-plastic, rapid dilatancy; trace very fine to coarse sand, trace small pebbles; moist; medium stiff; pale brown (10YR 6/3).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-16.0', 17.0'-20.0', 77.0'-81.0' and 89.0'-100.0' bgs.
No odor or staining observed.
No Recovery - drilling rod broke in ground. Abandon well location.

Date Start: 10/14/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				1.6					
				1.4					
60 -60	7	57.0-67.0	10.0				(60.0'-67.0') SILT, trace clay, low plasticity, slow dilatancy; moist; soft; gray (10YR 6/1).		
				3.0					
				1.4					
65 -65				2.1					
				1.6					
				1.3			(67.'0-77.0') SILT, trace clay, non-plastic, rapid dilatancy; moist; soft; brown (10YR 5/3).		
				2.1					
70 -70	8	67.0-77.0	10.0						
				1.8					
				0.0					
75 -75				0.8					
				0.9					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-16.0', 17.0'-20.0', 77.0'-81.0' and 89.0'-100.0' bgs.
No odor or staining observed.
No Recovery - drilling rod broke in ground. Abandon well location.

Date Start: 10/14/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.1			(77.0'-81.0') SAND, fine to medium, subround; trace silt; well sorted; wet; loose; pale brown (10YR 6/3).		
				0.0					
80 -80	9	77.0-87.0	10.0						
				0.4			(81.0'-86.0') CLAY and SILT, low plasticity, no dilatancy; some vey fine to coarse sand, some small pebbles, moist; hard; light grayish brown (10YR 6/3).		
				0.9					
85 -85				1.2					
				0.0			(86.0'-87.0') SANDSTONE, weathered, fine grained; dry to moist; light grayish brownish (2.5Y 6/2).		
				0.0					
							(87.0'-89.0') SHALE, weathered; moist; gray (2.5Y 5/0).		
	10	87.0-92.0	5.0	0.1			(89.0'-100.0') SANDSTONE, fine grained; dense; wet; light gray (10YR 7/1).		
90 -90				0.0					
				0.0					
	11	92.0-97.0	5.0						
95 -95				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-16.0', 17.0'-20.0', 77.0'-81.0' and 89.0'-100.0' bgs.
No odor or staining observed.
No Recovery - drilling rod broke in ground. Abandon well location.

Date Start: 10/14/2013
Date Finish: 10/21/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Dan
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 110.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
	12	97.0-100.0	3.0	0.0					
100 / 100							(100.0'-110.0') No Recovery - drilling rod broke in ground. Abandon well location.		
				NA					
	13	100.0-110.0	0.0						
				NA					
105 / 105				NA					100.0-110.0' bgs. (Sealed Casing)
				NA					
				NA					
				NA					
110 / 110							End of boring at 110.0' bgs.		
115 / 115									

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-16.0', 17.0'-20.0', 77.0'-81.0' and 89.0'-100.0' bgs.
No odor or staining observed.
No Recovery - drilling rod broke in ground. Abandon well location.

Date Start: 10/22/2013
Date Finish: 10/25/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39B**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
									Protective Casing
0 / 0	1	0.0-7.0	7.0	0.0			(0.0'-3.8') SILT, trace clay, non-plastic, low dilatancy; and SAND, very fine to coarse, subround; moist; medium stiff; yellow brown (10YR 5/4). NOTE: Fill.		
				0.0			(3.8'-6.0') CLAY, little silt, medium plasticity, no dilatancy; trace fine sand; moist; stiff; yellowish brown (10YR 5/4).		
5 / -5				0.1			(6.0'-6.8') SAND, very fine to coarse, subround; some silt; poorly sorted; moist; loose; yellowish brown (10YR 5/4).		
				0.0			(6.8'-10.0') SILT, trace clay, non-plastic, slow dilatancy; trace very fine to medium sand; trace small pebbles, subround; moist; stiff; brown (10YR 5/3).		
	2	7.0-17.0	10.0	0.0			(10.0'-12.0') SAND, fine, subround; trace silt; well sorted; wet; loose; brown (10YR 5/3).		
10 / -10				0.2			(12.0'-16.0') SILT, little clay, non-plastic, slow dilatancy; some very fine to coarse sand, wet; medium stiff; brown (10YR 5/3).		
				0.0			(16.0'-17.0') CLAY, some silt, medium to high plasticity, no dilatancy; trace very fine to coarse sand, trace small pebbles, medium stiff; moist; brown (10YR 5/3).		
15 / -15				0.3					
				0.2					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-12.0', 17.0'-20.0', 77.0'-81.5' and 89.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/22/2013
Date Finish: 10/25/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39B**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(17.0'-20.0') SAND, very fine to fine, subround; trace silt; well sorted; wet; yellowish brown (10YR 5/6).		
				2.4					
20 -20	3	17.0-27.0	10.0				(20.0'-24.0') SILT, trace clay, non-plastic, rapid dilatancy; trace very fine to coarse sand, trace granules to medium pebbles, subround; moist; medium stiff; light gray (10YR 7/1).		
				0.0					
				0.0					
				0.0			(24.0'-31.0') CLAY, some silt, medium plasticity, no dilatancy; trace very fine to coarse sand, trace granules and small pebbles; moist; soft; brown (10YR 5/3).		
25 -25				0.0					
				0.3					
				10.0					
				8.1					
30 -30	4	27.0-37.0	10.0						
				8.0			(31.0'-32.0') SAND, very fine to coarse, subround; little silt, trace clay; poorly sorted; moist; brown (10YR 5/3).		
							(32.0'-38.0') SAND, very fine to fine, subround; trace silt; well sorted; moist; brown (10YR 5/3).		
				0.8					
35 -35				0.9					
				10.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-12.0', 17.0'-20.0', 77.0'-81.5' and 89.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/22/2013
Date Finish: 10/25/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39B**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				11.8					
							(38.0'-45.0') SAND, vey fine to fine, subround; trace silt; well sorted; moist; light gray (10YR 7/1).		
				9.8					
40 -40	5	37.0-47.0	10.0	8.1					
				2.1					
45 -45				5.2			(45.0'-47.0') SILT, non-plastic, rapid dilatancy; and SAND, very fine, moist; stiff; light gray (10YR 7/1).		
				0.0					
				0.0			(47.0'-53.0') SILT, trace clay, non-plastic, slow to rapid dilatancy; little very fine to coarse sand, trace small to large pebbles, subround; moist; stiff; grayish brown (10YR 5/3).		0.0-97.0' bgs. (4.0" Steel Casing)
				0.0					0.0-97.0' bgs. (Concrete)
50 -50	6	47.0-57.0	10.0	0.0					
				0.0			(53.0'-55.0') SILT, trace clay, non-plastic, slow dilatancy; little very fine to coarse sand, trace small to large pebbles, subround; moist; hard; grayish brown (10YR 5/2).		
55 -55				0.8			(55.0'-60.0') SILT, trace clay, non-plastic, rapid dilatancy; trace very fine to coarse sand, trace small pebbles, moist; medium stiff; pale brown (10YR 6/3).		
				0.2					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-12.0', 17.0'-20.0', 77.0'-81.5' and 89.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/22/2013
Date Finish: 10/25/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39B**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.8					
				0.2					
60 -60	7	57.0-67.0	10.0				(60.0'-67.0') SILT, trace clay, non-plastic to low plasticity; moist; soft; gray (10YR 6/1).		
				2.0					
				0.8					
65 -65				0.9					
				0.0					
				0.0			(67.0'-77.0') SILT, trace clay, non-plastic, rapid dilatancy; moist; soft; brown (10YR 5/3).		
				0.3					
70 -70	8	67.0-77.0	10.0						
				0.0					
				0.8					
75 -75				0.9					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-12.0', 17.0'-20.0', 77.0'-81.5' and 89.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/22/2013
Date Finish: 10/25/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39B**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	9	77.0-87.0	10.0	0.0 0.0 0.0			(77.0'-81.5') SAND, fine to medium, subround; well sorted; wet; loose; pale brown (10YR 6/3).		
85 -85				0.0 0.1 0.0			(81.5'-87.0') CLAY and SILT, low plasticity, no to slow dilatancy; some very fine to coarse sand, trace small to large pebbles, subround; moist; hard; light grayish brown (10YR 6/3).		
90 -90	10	87.0-92.0	5.0	0.2 0.0 0.0			(87.0'-89.0') SHALE, laminated, weathered; moist; gray (2.5Y 5/0). (89.0'-112.0') SANDSTONE, fine grained; dense; wet; light gray (10YR 7/1).		
95 -95	11	92.0-97.0	5.0	0.0 0.0 0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-12.0', 17.0'-20.0', 77.0'-81.5' and 89.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/22/2013
Date Finish: 10/25/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 112.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-39B**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
100-100	12	97.0-107.0	10.0	0.0 0.0 0.0 0.0 0.0					97.0-112.0' bgs. (3.0" Open Hole)
105-105	13	107.0-112.0	5.0	0.0 0.0					
110-110							End of boring at 112.0' bgs.		
115-115									

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-12.0', 17.0'-20.0', 77.0'-81.5' and 89.0'-112.0' bgs.
No odor or staining observed.

Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 92.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-40**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.8') ASPHALT.		Protective Casing
	1	0.0-7.0	7.0	0.0			(0.8'-5.0') SAND, large granules, small to large pebbles, subround; and SILT; poorly sorted; moist; pale brown (10YR 6/3). NOTE: Fill.		
				0.0					
5 / -5				0.0			(5.0'-9.0') SILT, trace clay, non-plastic, slow to dilatancy; trace fine to medium sand, trace pebbles, small to large, subround; medium stiff; moist; light yellowish brown (10YR 6/4).		
				0.0					
				0.0					
	2	7.0-17.0	10.0	0.0			(9.0'-14.0') CLAY, little silt, medium to high plasticity, no dilatancy; fine sand, small pebbles, subangular; moist; medium stiff; gray (5Y 5/1).		
10 / -10				0.0					
				0.0					
				0.0			(14.0'-15.0') CLAY, some silt, low to medium plasticity, no dilatancy; trace fine sand, subround; moist; stiff; light yellowish brown (2.5Y 6/3).		
15 / -15				0.0			(15.0'-17.0') SAND, fine to medium, subround; some silt; poorly sorted; moist; medium dense; brownish yellowish (10YR 6/8).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 73.0'-73.5' bgs.
No odor or staining observed.

Date Start: 10/24/2013 **Date Finish:** 10/24/2013 **Drilling Company:** Cascade **Driller's Name:** Mike, Joel, Steve **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 92.0' bgs **Surface Elevation:** **Descriptions By:** T.Darmon	**Well/Boring ID: MW-13-40** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	3	17.0-27.0	10.0	0.0 0.0 0.0 1.5 0.8 0.8			(17.0'-20.0') SILT, trace clay, non-plastic, slow dilatancy; little fine to coarse sand, little small to medium pebbles, subround; moist; stiff; pale brown (10YR 6/3). (20.0'-21.2') SAND, fine, subround; well sorted; loose; moist; very pale brown (10YR 7/4). (21.2'-22.0') SILT, some clay, low plasticity, no dilatancy; trace fine sand, subround; soft; moist; light yellowish brown (10YR 6/4). (22.0'-25.0') SAND, very fine to fine, subround; some silt; poorly sorted; moist; brownish yellow (10YR 6/6). (25.0'-26.0') SILT, trace clay, low plasticity, no dilatancy; trace fine to medium sand; hard; brownish yellow (10YR 6/6). (26.0'-28.0') SILT, non-plastic, rapid dilatancy; and SAND, very fine; moist; soft; gray (10YR 6/1).		
25 -25									
30 -30	4	27.0-37.0	10.0	1.3 2.1 0.0 0.0 0.0 0.8			(28.0'-42.0') SAND, very fine to fine, subround; little silt; well sorted; moist; loose; gray (10YR 6/1).		0.0-69.0' bgs. (Quick Grout) 0.0-72.0' bgs. (2.0" PVC Riser)
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered from 73.0'-73.5' bgs.
No odor or staining observed.

Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 92.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-40**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	5	37.0-47.0	10.0	0.2 0.0 0.0 0.0 0.0 0.0			(42.'0-47.0') SAND, very fine, trace coarse sand to small pebbles, subround to subangular; and SILT; poorly sorted; moist; gray (5Y 6/1).		
45 -45									
50 -50	6	47.0-57.0	10.0	0.2 0.1 0.0 0.0 0.0 0.0			(47.0'-50.0') SILT, trace clay,non-plastic; trace fine to medium sand, trace small to medium pebbles, subround to angular, non-plastic; soft; moist; grayish brown (10YR 5/2). (50.0'-51.0') SILT, trace clay, non-plastic, slow to rapid dilatancy, some fine to coarse sand, trace small to medium pebbles; moist; hard; grayish brown (10YR 5/2). (51.0'-52.0') SILT, non-plastic; and SAND, fine to coarse, subround; moist; soft; loose; grayish brown (10YR 5/2). (52.0'-55.0') SILT, trace clay, non-plastic, rapid dilatancy; and SAND, fine to coarse sand; trace small to medium pebbles, subround; moist; hard; gray (10YR 6/1).		
55 -55							(55.0'-57.0') SILT, non-plastic, rapid dilatancy; some fine to coarse sand, little small to large pebbles, subangular to subround; moist; medium stiff; gray (10YR 6/1).		

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Remarks: bgs = below ground surface
Groundwater encountered from 73.0'-73.5' bgs.
No odor or staining observed.

Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 92.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-40**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(57.0'-62.0') SILT, trace clay, non-plastic, rapid dilatancy; some fine to coarse sand, trace small to large pebbles, subangular to subround; moist; medium stiff; gray (10YR 6/1).		
				0.0					
60 -60	7	57.0-67.0	10.0	0.0					
							(62.0'-62.1') SAND, fine to medium, subround; trace silt; well sorted; moist; light brownish gray (10YR 6/2).		
				0.0			(62.1'-69.0') SILT, trace clay, non-plastic, rapid dilatancy; moist; medium stiff; gray (2.5Y 5/0).		
65 -65				0.0					
				0.0					
				0.0					
				0.0			(69.0'-73.0') SILT, little clay, low plasticity, slow dilatancy; moist; medium stiff; gray (2.5Y 5/0).		69.0-71.0' bgs. (Filter Pack - K&E #0)
70 -70	8	67.0-72.0	5.0	0.0					
				0.0					
				0.0			(73.0'-73.5') SAND, very fine, subround; some silt, trace clay; poorly sorted; wet; gray (2.5Y 5/0).		
	9	72.0-77.0	5.0				(73.5'-81.0') SILT, trace clay, non-plastic, rapid dilatancy; moist; light yellowish brown (10YR 6/4).		71.0-92.0' bgs. (Filter Pack - K&E #1)
75 -75				0.0					72.0-77.0' bgs. (2.0" 10-Slot PVC Screen)
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 73.0'-73.5' bgs.
No odor or staining observed.

Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: Mike, Joel, Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 92.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **MW-13-40**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	77.0-82.0	5.0	0.0 0.0 0.0			(81.0'-82.0') SILT, trace clay, non-plastic, slow dilatancy; little limestone; moist; stiff; light gray (10YR 7/1).		
85 -85	11	82.0-87.0	5.0	0.0 0.0 0.0			(82.0'-87.0') SILT, little clay, low plasticity; trace fine to coarse sand, trace small to medium pebbles, subround; moist; stiff; light gray (10YR 7/1).		
90 -90	12	87.0-92.0	5.0	0.0 0.0 0.0			(87.0'-92.0') SHALE and SANDSTONE, weathered; moist to damp; gray (2.5Y 5/0).		
95 -95							End of boring at 92.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered from 73.0'-73.5' bgs.
No odor or staining observed.

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Date Start: 10/28/2013
Date Finish: 10/28/2013
Drilling Company: Cascade
Driller's Name: Scott
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-41**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									Protective Casing
				0.0			(0.0'-0.6') CONCRETE.		0.0-1.0' bgs. (Concrete)
				0.0			(0.6'-16.5') SAND, very fine to coarse, trace small pebbles, subround; little silt; poorly sorted; moist to wet; yellowish brown (10YR 5/6).		
	1	0.0-6.0	6.0	0.0					
				0.0					
				0.0					
5 / -5				0.0					
				0.0					
	2	6.0-10.0	4.0	0.0					
				0.0					
				0.0					
10 / -10				0.0					
				0.0					
	3	10.0-17.0	6.0	0.0					
				0.0					
				0.0					
15 / -15				0.0					
				0.0			(16.5'-19.0') CLAY, some silt, medium plasticity, no dilatancy; little to some fine to		

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Remarks: bgs = below ground surface
Groundwater encountered from 0.6'-16.5' bgs.
No odor or staining observed.

Date Start: 10/28/2013
Date Finish: 10/28/2013
Drilling Company: Cascade
Driller's Name: Scott
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-41**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			medium sand, subround; trace small to large pebbles, subround; moist; medium stiff; grayish brown (10YR 5/2).		
				0.1					
20 -20	4	17.0-27.0	9.0	0.0			(19.0'-21.0') SILT, trace clay, non-plastic, no dilatancy; some very fine sand, subround; moist; soft; brownish yellowish (10YR 6/6).		
				0.0					
				0.0			(21.0'-22.0') SAND, very fine to fine, subround; some silt; well sorted; moist; brownish yellow (10YR 6/6).		
				0.0			(22.0'-22.5') SILT, trace clay, non-plastic, no dilatancy; some very fine sand, subround; moist; soft; brownish yellow (10YR 6/6).		
				0.0			(22.5'-34.0') CLAY and SILT, medium to low plasticity, no dilatancy; little very fine to fine sand, subround; trace small to medium pebbles, subround; moist; medium stiff; grayish brown (10YR 5/2).		
				0.0					
25 -25				0.0					
				0.0					
				0.0					
				0.0					
30 -30	5	27.0-37.0	9.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0			(34.0'-56.0') SAND, very fine to fine, subround; some silt; well sorted; dry to moist; light gray (10YR 7/1).		
				0.0					
				0.0					
				0.0					1.0-73.0' bgs.

Remarks: bgs = below ground surface
Groundwater encountered from 0.6'-16.5' bgs.
No odor or staining observed.

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Date Start: 10/28/2013
Date Finish: 10/28/2013
Drilling Company: Cascade
Driller's Name: Scott
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-41

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	9.0	0.0			NOTE: Some silt from 4.0-40.5' bgs.		(Grout) 0.0-77.0' bgs. (2.0" PVC Riser)
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
45 -45				0.0					
				0.0					
				0.0					
	7	47.0-57.0	9.0	0.0					
				0.0					
				0.0					
50 -50				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0					
				0.0					
				0.0			(56.0'-79.0') SILT, little clay, low plasticity, slow dilatancy; little very sand, subround; moist; medium stiff; gray (10YR 5/1).		

Remarks: bgs = below ground surface
Groundwater encountered from 0.6'-16.5' bgs.
No odor or staining observed.

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Date Start: 10/28/2013
Date Finish: 10/28/2013
Drilling Company: Cascade
Driller's Name: Scott
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

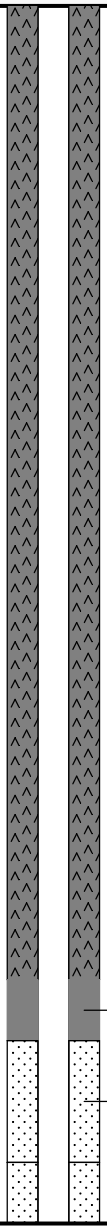
Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-41
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-67.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
65 -65				0.0					
				0.0					
				0.0					
	9	67.0-77.0	9.0	0.0					
				0.0					
				0.0					
70 -70				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					
				0.0					



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Remarks: bgs = below ground surface
Groundwater encountered from 0.6'-16.5' bgs.
No odor or staining observed.

Date Start: 10/28/2013
Date Finish: 10/28/2013
Drilling Company: Cascade
Driller's Name: Scott
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-41**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	77.0-82.0	5.0	0.0 0.0 0.0 0.0 0.0			(79.0'-82.0') SANDSTONE, pulverized with some small fragments, fine; light gray (10YR 7/1).		76.0-82.0' bgs. (Filter Pack - K&E #1 77.0-82.0' bgs. (2.0" 10-Slot Stainless Steel Screen)
							End of boring at 82.0' bgs.		
85 -85									
90 -90									
95 -95									

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Remarks: bgs = below ground surface
Groundwater encountered from 0.6'-16.5' bgs.
No odor or staining observed.

Date Start: 11/11/2013
Date Finish: 11/14/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-42**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Snow, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	0.0			(0.0'-0.5') GRASS and TOPSOIL.		J-plug
				0.0			(0.5'-3.0') SAND, fine to coarse, subround; trace granules to large pebbles, subround; and CLAY, low plasticity, slow dilatancy; moist to wet; medium stiff; brown (10YR 4/3).		
				0.0					
				0.1			(3.0'-16.0') CLAY, some silt, medium plasticity, no dilatancy; some fine to medium sand, little granules to large pebbles, subround; moist; stiff; dark grayish brown (10YR 4/2). NOTE: Glacial Till.		
5 / -5				0.0					
	2	6.0-7.0	1.0	0.0					
	3	7.0-17.0	10.0	0.0					
10 / -10				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
15 / -15				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-3.0', 19.5'-23.5' and 28.0'-35.5' bgs.
No odor or staining observed.

Date Start: 11/11/2013
Date Finish: 11/14/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-42

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Snow, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(16.0'-16.5') PEAT, some organic material; medium stiff; moist; dark brown.		
				0.0			(16.5'-19.5') CLAY, trace silt, high plasticity, no dilatancy; moist; soft; grayish brown (10YR 5/2).		
				0.0					
				0.0					
20 -20	4	17.0-27.0	10.0	0.0			(19.5'-23.5') SAND, medium to coarse, little granules to small pebbles, subround, trace medium to large pebbles, subround; little silt; poorly sorted; wet; light grayish brown (10YR 6/2).		
				0.0					
				0.0					
				0.0					
				0.0			(23.5'-28.0') CLAY, some silt, medium to high plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; moist; stiff; pale brown (10YR 6/3).		
25 -25				0.0					
				0.0					
				0.0					
				0.0			(28.0'-35.5') SAND, very fine to fine, subround; little silt; well sorted; wet; pale brown (10YR 6/3). NOTE: from 35.0'-35.5', medium to coarse sand.		
				0.0					
30 -30	5	27.0-37.0	10.0	0.0					
				0.1					
				0.0					
				0.0					
				0.0					
35 -35				0.0			(35.5'-42.0') CLAY, some silt, medium plasticity, no dilatancy; little fine to medium		

Well/Boring Construction:
- 0.0-37.0' bgs. (3.0" Steel Outer Casing)
- 0.0-66.0' bgs. (Cement Grout)
- 3.0' ags-70.0' bgs. (2.0" Sch. 40 PVC Casing)

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-3.0', 19.5'-23.5' and 28.0'-35.5' bgs.
No odor or staining observed.

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Date Start: 11/11/2013
Date Finish: 11/14/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-42**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Snow, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			sand, trace granules to very large pebbles, subround; moist; stiff; grayish brown (10YR 5/2). NOTE: Glacial Till.		
				0.0					
				0.0					
				0.0					
40 -40	6	37.0-47.0	10.0	0.0					
				0.0					
				0.0					
				0.0			(42.0'-58.0') SAND, very fine to fine, subround; little silt; well sorted; dry; very pale brown (10YR 7/3).		
				0.0					
				0.0					
45 -45				0.0					
				0.0					
				0.0					
				0.0					
50 -50	7	47.0-57.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-3.0', 19.5'-23.5' and 28.0'-35.5' bgs.
No odor or staining observed.

Date Start: 11/11/2013
Date Finish: 11/14/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-42**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Snow, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
	8	57.0-67.0	10.0	0.0			(58.0'-68.0') CLAY and SILT, medium plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial Till.		
60 -60				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
65 -65				0.0					
				0.0					
				0.0					
	9	67.0-75.0	7.0	0.0			(68.0'-76.0') SANDSTONE, pulverized with some large fragments, fine grained; light gray (10YR 7/2). NOTE: Grand River Formation.		
				0.0					
70 -70				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
75 -75				0.0					
	10	75.0-76.0	1.0	0.0			End of boring at 76.0' bgs.		

66.0-67.0' bgs. (Bentonite)
67.0-69.0' bgs. (Filter Pack - K&E #0)
69.0-76.0' bgs. (Filter Pack - K&E #1)
70.0-75.0' bgs. (2.0" 10-Slot Stainless Steel Screen)

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-3.0', 19.5'-23.5' and 28.0'-35.5' bgs.
No odor or staining observed.

Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 79.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-43**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	NA			(0.0'-0.5') CONCRETE.		0.0-1.0' bgs. (Concrete)
				NA			(0.5'-9.5') SAND, very fine to coarse, trace granules to large pebbles, subround; some silt; poorly sorted; moist; brownish yellow (10YR 6/8). NOTE: Fill Material.		
				NA					
				NA					
5 / -5				NA					
	2	6.0-10.0	2.0	0.2					
				0.2					
				0.1					
10 / -10				0.1			(9.5'-12.0') CLAY, some silt; high plasticity, no dilatancy; little very fine to fine sand; trace granules, subround; moist; soft; dark grayish brown (10YR 4/2) with brownish yellow (10YR 6/8) mottling.		
				0.0					
				0.0			(12.0'-15.0') SAND, very fine to fine, subround; and SILT, low plasticity, rapid dilatancy; wet; well sorted; dark gray (10YR 4/1).		
				0.0					
				0.0					
15 / -15	3	10.0-20.0	8.0	0.0			(15.0'-20.0') SAND, fine to coarse, subround; some silt; poorly sorted; wet; grayish brown (10YR 5/2).		
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-20.0' bgs.
No odor or staining observed.

Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 79.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-43**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
20 -20				0.0			(20.0'-27.5') CLAY, some silt, medium plasticity, no dilatancy; little to some fine sand, trace granules to large pebbles, subround; moist; medium stiff; grayish brown (10YR 5/2). NOTE: Glacial Till.		
				0.0					
				0.0					
				0.0					
				0.0					
25 -25	4	20.0-30.0	9.0	0.0					
				0.0					
				0.0					
				0.0			(27.5'-28.0') SAND, very fine to fine, subround; and SILT; well sorted; moist; grayish brown (10YR 5/2).		
				0.0			(28.0'-43.0') CLAY and SILT, medium plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; moist; stiff to very stiff; gray (10YR 5/1). NOTE: Glacial Till.		
				0.0					
30 -30				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35	5	30.0-40.0	10.0	0.0					1.0-68.0' bgs. (Grout)
				0.0					0.0-72.0' bgs. (2.0" PVC Riser)
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-20.0' bgs.
No odor or staining observed.

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Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 79.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-43**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
40 -40				0.0					
				0.0					
				0.0					
				2.1			(43.0'-60.0') SAND, very fine to fine, subround; some silt; well sorted; dry; light brownish gray (10YR 6/2).		
45 -45	6	40.0-50.0	10.0	2.3					
				1.1					
				0.8					
				0.4					
				0.2					
50 -50				0.3					
				0.0					
				0.0					
				0.0					
				0.0					
55 -55	7	50.0-60.0	5.0	0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-20.0' bgs.
No odor or staining observed.

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Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 79.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-43**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
60 -60				0.0			(60.0'-77.0') CLAY and SILT, medium to low plasticity, no dilatancy; little to some fine sand, trace granules to very large pebbles, subround; moist; stiff; dark gray (10YR 4/1). NOTE: Glacial Till.		
				0.0					
				0.0					
				0.0					
				0.0					
65 -65	8	60.0-70.0	9.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
70 -70				0.0			NOTE: Little small to very large fine sandstone fragments near 70.0' bgs.		
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
75 -75	9	70.0-79.0	9.0	0.0					
				0.0					
				0.0					

68.0-69.0' bgs. (Bentonite)
69.0-71.0' bgs. (Filter Pack - K&E #0)
71.0-77.0' bgs. (Filter Pack - K&E #1)
72.0-77.0' bgs. (2.0" 10-Slot Stainless Steel Screen)

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Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-20.0' bgs.
No odor or staining observed.

Date Start: 10/24/2013
Date Finish: 10/24/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 79.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-43**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(77.0'-77.5') SANDSTONE and SHALE, pulverized with little fragments.		
				0.0			(77.5'-79.0') SHALE with trace sandstone fragments. NOTE: Saginaw Formation.		
80 -80							End of boring at 79.0' bgs.		
85 -85									
90 -90									
95 -95									

Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-20.0' bgs.
No odor or staining observed.

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Date Start: 10/28/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 115.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-44**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.5') CONCRETE.		
	1	0.0-6.0	6.0	NA NA NA NA NA NA			(0.5'-10.0') SAND, very fine to coarse, trace granules to large pebbles, subround; some silt; poorly sorted; moist to wet; brownish yellow (10YR 6/8). NOTE: Fill material.		
5 / -5									
	2	6.0-10.0	4.0	0.0 0.0 0.0 0.0					
10 / -10							(10.0'-13.0') CLAY, some silt, high plasticity, no dilatancy; little very fine to fine sand, trace granules, subround; most; medium stiff to soft; dark grayish brown (10YR 4/2) with brownish yellow mottling (01YR 6/8).		
	3	10.0-17.0	7.0	0.0 0.1 0.1 0.0 0.0 0.0 0.0			(13.0'-16.0') SAND, very fine to fine, subround; and SILT, low plasticity to non-plastic, rapid dilatancy; wet; well sorted; dark gray (10YR 4/1).		
15 / -15							(16.0'-19.0') SAND, very fine to coarse, subround; and SILT, non-plastic; poorly sorted; grayish brown (10YR 5/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-10.0', 13.0'-16.0' and 24.0'-24.5' bgs.
No odor or staining observed.

Date Start: 10/28/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 115.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-44**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
20 -20	4	17.0-27.0	9.0	0.0			(19.0'-24.0') CLAY, some silt, medium to high plasticity, no dilatancy; little fine sand, trace granules to pebbles, subround; moist; stiff; grayish brown (10YR 5/2). NOTE: Glacial Till.		
				0.0					
				0.0					
				0.0					
				0.0			(24.0'-24.5') SAND, very fine to coarse, trace granules, subround; some silt; poorly sorted; moist to wet; grayish brown (10YR 5/2).		
25 -25				0.0			(24.5'-40.0') CLAY and SILT, medium plasticity, no dilatancy; little fine sand, trace granules, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial Till.		
				0.0					
				0.0					
				0.0					
				0.0					
30 -30	5	27.0-37.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-10.0', 13.0'-16.0' and 24.0'-24.5' bgs.
No odor or staining observed.

Date Start: 10/28/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 115.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-44**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0			(40.0'-59.0') SAND, very fine to fine, subround; some silt; well sorted; dry; light brownish gray (10YR 6/2).		0.0-96.0' bgs. (4.0" Steel Well Casing)
45 -45				0.0					0.0-96.0' bgs. (Concrete)
50 -50	7	47.0-57.0	10.0	0.0					
55 -55				0.1					

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-10.0', 13.0'-16.0' and 24.0'-24.5' bgs.
No odor or staining observed.

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Date Start: 10/28/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 115.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-44**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
60 -60	8	57.0-67.0	10.0	0.0			(59.0'-77.0') CLAY and SILT, medium to low plasticity, no dilatancy; little to some fine sand, trace granules to very large pebbles, subround; moist; stiff; dark gray (10YR 4/1). NOTE: Glacial Till. NOTE: Trace large sandstone fragments.		
				0.0					
				0.0					
				0.0					
				0.0					
65 -65				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
70 -70	9	67.0-77.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-10.0', 13.0'-16.0' and 24.0'-24.5' bgs.
No odor or staining observed.

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Date Start: 10/28/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 115.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-44**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	10	70.0-80.0	3.0	0.0 0.0 0.0			(77.0'-81.0') SHALE, with trace fine sandstone laminations; very dark gray (10YR 3/1).		
80 -80				0.0					
	11	80.0-85.0	5.0	0.0 0.0 0.0			(81.0'-83.0') SANDSTONE, fine grained; light gray (10YR 7/1). (83.0'-85.0') SHALE, with some fine sandstone laminations; very dark gray (10YR 3/1).		
85 -85				0.0					
	12	85.0-92.0	7.0	0.0 0.0 0.0 0.0 0.0 0.0			(85.0'-115.0') SANDSTONE, with black shale inclusions. NOTE: Large sandstone cores more prevalent.		
90 -90									
	13	92.0-96.0	4.0	0.0 0.0 0.0 0.0					
95 -95									
				NA					

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-10.0', 13.0'-16.0' and 24.0'-24.5' bgs.
No odor or staining observed.

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Date Start: 10/28/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Scott Parks
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 115.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-44**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
100 / 100	14	96.0-115.0	0.0	NA					
				NA					
				NA					
				NA					
				NA					
				NA					
				NA					
105 / 105				NA					
				NA					96.0-115.0' bgs. (3.0" Open Hole)
				NA					
				NA					
				NA					
				NA					
110 / 110				NA					
				NA					
				NA					
				NA					
				NA					
				NA					
115 / 115							End of boring at 115.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-10.0', 13.0'-16.0' and 24.0'-24.5' bgs.
No odor or staining observed.

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Date Start: 11/18/2013
Date Finish: 11/18/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 22.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 77.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-45

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	0.0			(0.0'-0.5') CONCRETE.		
				0.0			(0.5'-5.0') SAND, very fine to coarse, trace to little pebbles, subround; trace silt; poorly sorted; moist; yellowish brown (10YR 5/4).		
				0.0					
				0.0					
				0.0					
5 / -5				0.0			(5.0'-22.0') CLAY, some silt, medium to high plasticity, no dilatancy; trace fine to medium sand, subround; trace granules to large pebbles, subround; moist; stiff; grayish brown (10YR 5/2). NOTE: Glacial Till.		
	2	6.0-7.0	1.0	0.0					
	3	7.0-17.0	10.0	0.1					
				0.0					
10 / -10				0.0					
				0.0					
				0.0					
				0.0					
15 / -15				0.0					
				0.0					
				0.0					
				0.0					

0.0-68.0' bgs. (Grout)
0.0-28.0' bgs. (3.0" Steel Casing)

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Remarks: bgs = below ground surface
Groundwater encountered from 22.0'-26.0' bgs.
No odor or staining observed.

Date Start: 11/18/2013
Date Finish: 11/18/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 22.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 77.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-45

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0			(22.0'-26.0') SAND, very fine to fine, subround; trace granules to medium pebbles, subround; and SILT, medium plasticity, slow dilatancy; wet; poorly sorted; grayish brown (10YR 5/2).		
				0.0					
25 -25				0.0					
				0.0					
				0.0			(26.0'-38.0') SILT, some clay, low plasticity to non-plastic, no dilatancy; little very fine to medium sand, trace granules to large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial Till.		
	5	27.0-37.0	8.0	0.0					
				0.0					
30 -30				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.0					0.0-72.0' bgs. (2.0" Sch. 40 PVC Casing)
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 22.0'-26.0' bgs.
No odor or staining observed.

Date Start: 11/18/2013
Date Finish: 11/18/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 22.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 77.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-45

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0 0.1 0.1 0.0 0.2 0.1 0.1 0.0 0.0			(38.0'-49.0') SAND, very fine to medium, subround; trace silt; poorly sorted; dry to moist; light brownish gray (10YR 6/2). NOTE: Small to large pebbles from 44.0-44.5' bgs.		
45 -45									
50 -50	7	47.0-57.0	10.0	0.0 0.1 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0			(49.0'-51.5') CLAY, some silt, medium plasticity, no dilatancy; little fine sand, subround; trace small to large pebbles, subround; moist; medium stiff; gray (10YR 5/1). NOTE: Glacial Till. (51.5'-58.0') SAND, fine to medium, subround; trace silt; well sorted; dry; grayish brown (10YR 5/2).		
55 -55									

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Remarks: bgs = below ground surface
Groundwater encountered from 22.0'-26.0' bgs.
No odor or staining observed.

Date Start: 11/18/2013
Date Finish: 11/18/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 22.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 77.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-45

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-67.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(58.0'-68.0') SILT, trace clay, non-plastic, no dilatancy; little very fine to fine sand; trace small to large pebbles, subround; stiff; gray (10YR 5/1). NOTE: Trace small to large fragments of fine grained sandstone at 61.0' bgs.		
65 -65	9	67.0-69.0	2.0	0.0 0.0			(68.0'-77.0') SANDSTONE, very fine to fine grained, subround; well sorted; light gray (10YR 7/1).		68.0-69.0' bgs. (Bentonite)
70 -70	10	69.0-77.0	8.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					69.0-71.0' bgs. (Filter Pack - K&E #0) 69.0-77.0' bgs. (Filter Pack - K&E #1) 72.0-77.0' bgs. (2.0" 10-Slot Stainless Steel Screen)
75 -75							End of boring at 77.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 22.0'-26.0' bgs.
No odor or staining observed.

Date Start: 11/6/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 3.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 73.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-46**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	7.0	0.0			(0.0'-0.5') ASPHALT.		
				0.0			(0.5'-3.0') SAND, fine to medium, trace granules to small pebbles, subround; little clay; poorly sorted; dry; dark gray (10YR 4/1).		
				0.0					
				0.0			(3.0'-10.0') CLAY, some silt, high plasticity, slow dilatancy; trace granules to small pebbles, subround; soft; wet; gray (10YR 5/1).		
5 / -5				0.0					
				0.0					
	2	6.0-7.0	10.0	0.1					
	3	7.0-17.0	10.0	0.0					
				0.0					
				0.0					
10 / -10				0.0			(10.0'-11.0') PEAT, some roots; dry; very dark brown (10YR 2/2).		
				0.0			(11.0'-22.0') CLAY and SILT, medium to high plasticity, slow dilatancy; trace small to medium pebbles, subround; soft; moist; grayish brown (10YR 5/3).		
				0.0					
				0.0					
				0.0					
15 / -15				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 3.0'-10.0' bgs.
No odor or staining observed.

Date Start: 11/6/2013 **Date Finish:** 11/6/2013 **Drilling Company:** Cascade **Driller's Name:** Mike Bond **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Core Barrel **Rig Type:** Sonic **Water Level Start (ft. bgs.):** 3.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 73.0 **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **MW-13-46** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	9.0	0.0 0.0 0.0 0.0 0.0					
				0.0 0.0 0.0 0.0 0.0			(22.0'-36.0') SAND, fine to medium, trace granules to large pebbles, subround; poorly sorted; dry; light brownish gray (10YR 6/2).		
25 -25									
30 -30	5	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					0.0-64.0' bgs. (Grout) 0.0-68.0' bgs. (2.0" Sch. 40 PVC Casing)
35 -35							(36.0'-65.5') SAND, very fine to fine, trace granules, subround; poorly sorted; dry; light brownish gray (10YR 6/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 3.0'-10.0' bgs.
No odor or staining observed.

Date Start: 11/6/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 3.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 73.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-46**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0 0.0 0.0 0.0 0.0 0.2 0.1 0.0 0.0 0.0					
45 -45									
50 -50	7	47.0-57.0	10.0	0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
55 -55									

Remarks: bgs = below ground surface
Groundwater encountered from 3.0'-10.0' bgs.
No odor or staining observed.

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Date Start: 11/6/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 3.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 73.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-46**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Rain, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-67.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
65 -65				0.0			(65.5') SILT, trace clay, non-plastic, slow dilatancy; some very fine to fine sand, subround; soft; moist; gray (10YR 5/1).		
				0.0			(66.5'-73.0') SANDSTONE, pulverized with some large fragments, fine; light gray (10YR 7/1).		
	9	67.0-73.0	6.0	0.0					
70 -70				0.0					
				0.0					
				0.0					
				0.0					
				0.0			End of boring at 73.0' bgs.		
75 -75									

64.0-65.0' bgs. (Bentonite)
65.0-67.0' bgs. (Filter Pack - K&E #0)
67.0-73.0' bgs. (Filter Pack - K&E #1)
68.0-73.0' bgs. (2.0" 10-Slot Stainless Steel Screen)

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Remarks: bgs = below ground surface
Groundwater encountered from 3.0'-10.0' bgs.
No odor or staining observed.

Date Start: 11/1/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 119.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-47
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
				0.0			(0.0'-0.5') ASPHALT.		
				0.0			(0.5'-2.0') SAND, fine to medium, trace granules, subround; trace silt; dry; yellowish brown (10YR 5/4).		
	1	0.0-6.0	6.0	0.0			(2.0'-15.0') CLAY, some silt, low plasticity, no dilatancy; little very fine to fine sand, trace granules to large pebbles, subround; medium stiff to stiff; most; dark gray (10YR 4/1). NOTE: Glacial Till.		
				0.0					
				0.0					
5 / -5				0.0					
	2	6.0-10.0	4.0	0.0					
				0.0					
				0.0					
10 / -10				0.0					
	3	10.0-17.0	7.0	0.1					
				0.0					
				0.2					
				0.1					
15 / -15				0.4					
				3.3			(15.0'-21.0') PEAT, some roots; moist; very dark brown (10YR 2/2).		
				0.1					

Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

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Date Start: 11/1/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 119.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-47

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.1 0.0 0.0			(21.0'-36.5') SILT, some clay, medium plasticity, no dilatancy; very soft; moist; dark gray (10YR 4/1). NOTE: trace organics, small roots. NOTE: Increase in plasticity from medium to high at 26.0' bgs.		
30 -30	5	27.0-37.0	10.0	0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
35 -35							(36.5'-41.0') SAND, fine to coarse, subround; little; wet; poorly sorted; light brownish		

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Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

Date Start: 11/1/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 119.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-47

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.1			gray (10YR 6/2).		
40 -40	6	37.0-47.0	10.0	0.0					
				0.0					
				0.0					
				0.0			(41.0'-46.0') CLAY and SILT, low to medium plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; stiff; moist; grayish brown (10YR 5/2). NOTE: Glacial Till.		
				0.0					
				0.0					
45 -45				0.0					
				0.0					
				0.0			(46.0'-57.0') SILT, little clay, low to non-plastic, no dilatancy; some fine sand, trace granules to large pebbles, subround; medium stiff; moist; grayish brown (10YR 5/2).		
				0.0					
				0.0					
				0.0					
50 -50	7	47.0-57.0	10.0	0.0					0.0-99.0' bgs. (Cement Grout)
				0.0					(0.0-99.0' bgs. (4.0" Steel Casing)
				0.0					
				0.0					
				0.0					
55 -55				0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

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Date Start: 11/1/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 119.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-47

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(57.0'-60.0') SILT, little clay, low plasticity, slow dilatancy; some fine sand, trace granules to medium pebbles, subround; medium stiff to soft; grayish brown (10YR 5/2).		
60 -60	8	57.0-67.0	10.0	0.0			(60.0'-64.0') SAND, fine to medium; well sorted; moist; pale brown (10YR 6/3).		
				0.0			(64.0'-71.0') SAND, medium to coarse; little fine sand, trace granules to small pebbles, subround; poorly sorted; wet; brown (10YR 5/3).		
65 -65				0.0					
				0.0					
				0.0					
				0.0					
70 -70	9	67.0-77.0	10.0	0.0			(71.0'-74.0') CLAY, some silt, medium plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; medium stiff; moist; gray (10YR 5/1). NOTE: Glacial Till.		
				0.0					
				0.0					
				0.0					
				0.0			(74.0'-119.0') SANDSTONE, pulverized with some large fine fragments; light gray (10YR 7/1).		
75 -75				0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

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Date Start: 11/1/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 119.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-47**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	77.0-85.0	8.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
85 -85	11	85.0-92.0	7.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
90 -90									
95 -95	12	92.0-99.0	7.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

Date Start: 11/1/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 119.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-47**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
100-100				NA					
				NA					
				NA					
				NA					
				NA					
				NA					
105-105	13	99.0-119.0	0.0	NA					
				NA					
				NA					
				NA					
				NA					
				NA					99.0-119.0' bgs. (3.0" Open Hole)
110-110				NA					
				NA					
				NA					
				NA					
				NA					
115-115				NA					
				NA					
				NA					

Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

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Date Start: 11/1/2013
Date Finish: 11/6/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 119.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-47**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				NA NA					
120-120							End of boring at 119.0' bgs.		
125-125									
130-130									
135-135									

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Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

Date Start: 11/8/2013
Date Finish: 11/11/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 38.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-48**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.5') ASPHALT.		0.0-1.0' bgs. (Concrete)
	1	0.0-6.0	5.0	0.0			(0.5'-3.0') SAND, fine to medium, trace granules to small pebbles, subround; trace silt; moist; yellowish brown (10YR 5/4).		
				0.0					
				0.0					
				0.0			(3.0'-16.5') CLAY, some silt, low plasticity, no dilatancy; little very fine to fine sand, trace granules to large pebbles, subround; medium stiff; moist; dark gray (10YR 4/1). NOTE: Glacial Till.		
5 / -5				0.0					
	2	6.0-7.0	1.0	0.0					
	3	7.0-17.0	10.0	0.0					
				0.1					
				0.1					
10 / -10				0.0					
				0.0					
				0.0					
				0.1					
15 / -15				0.0					
				0.0					
				0.0			(16.5'-22.0') PEAT, some roots; moist; very dark brown (10YR 2/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 38.0'-43.0' and 64.0'-70.0' bgs.
No odor or staining observed.

Date Start: 11/8/2013
Date Finish: 11/11/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 38.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-48**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	9.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0			(22.0'-38.0') SILT, some clay, medium plasticity, no dilatancy; very soft; moist; dark gray (10YR 4/1). NOTE: Trace organics, small roots.		
				0.0					
				0.0					
25 -25				0.0					
				0.0					
				0.0					
30 -30	5	27.0-37.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.0					
				0.0					

1.0-61.0' bgs. (Grout)

0.0-65.0' bgs. (2.0" Sch. 40 PVC Casing)

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Remarks: bgs = below ground surface
Groundwater encountered from 38.0'-43.0' and 64.0'-70.0' bgs.
No odor or staining observed.

Date Start: 11/8/2013
Date Finish: 11/11/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 38.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-48**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			(38.0'-43.0') SAND, fine to coarse , subround; little silt; wet; poorly sorted; light brownish gray (10YR 6/2).		
				0.0					
40 -40	6	37.0-47.0	9.0	0.0					
				0.0					
				0.0					
				0.0			(43.0'-47.0') CLAY and SILT, medium to high plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; stiff; moist; grayish brown (10YR 5/2). NOTE: Glacial Till.		
				0.0					
45 -45				0.0					
				0.0					
				0.0			(47.0'-61.0') SILT, little clay, low plasticity, slow to no dilatancy; some fine sand, trace granules to medium pebbles, subround; medium stiff to soft; moist; grayish brown (10YR 5/2).		
				0.0					
				0.0					
50 -50	7	47.0-57.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 38.0'-43.0' and 64.0'-70.0' bgs.
No odor or staining observed.

Date Start: 11/8/2013
Date Finish: 11/11/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 38.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-48
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-67.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0			(61.0'-64.0') SAND, fine to medium, subround; well sorted; moist; pale brown (10YR 6/3).		61.0-62.0' bgs. (Bentonite)
				0.0					62.0-64.0' bgs. (Filter Pack - K&E #0)
				0.0					
65 -65				0.0			(64.0'-70.0') SAND, medium to coarse, little fine sand, trace granules to small pebbles, subround; poorly sorted; wet; brown (10YR 5/3).		
				0.0					
				0.0					
	9	67.0-72.0	5.0	0.0					64.0-72.0' bgs. (Filter Pack - K&E #1)
				0.0					65.0-70.0' bgs. (2.0" 10-Slot Stainless Steel Screen)
70 -70				0.0					
				0.0			(70.0'-72.0') CLAY, some silt, medium plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; medium stiff; moist; gray (10YR 5/1) NOTE: Glacial Till.		
				0.0					
							End of boring at 72.0' bgs.		
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered from 38.0'-43.0' and 64.0'-70.0' bgs.
No odor or staining observed.

Date Start: 11/7/2013
Date Finish: 11/7/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 78.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-49**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	0.0 0.0 0.0 0.0 0.0 0.0			(0.0'-0.5') ASPHALT. (0.5'-8.0') CLAY and SILT, non-plastic, slow dilatancy; and SAND, fine to medium, subround; little granules to large pebbles, subround; moist to wet; soft; light yellowish brown (10YR 6/4).		
5 / -5	2	6.0-7.0	1.0	0.0					
	3	7.0-17.0	9.0	0.0 0.0 0.0 0.0 0.1			(8.0'-12.0') CLAY and SILT, medium plasticity, no dilatancy; little fine sand, subround; trace granules to medium pebbles, subround; moist; stiff; grayish brown (10YR 5/2).		
10 / -10				0.2 0.3 0.1			(12.0'-16.0') PEAT, some roots; dry to moist; medium stiff; dark yellowish brown (10YR 3/4).		
15 / -15				0.4 0.0			(16.0'-27.0') CLAY and SILT, medium to high plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; dry to moist; stiff; gray (10YR 5/1). NOTE: Glacial Till.		

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-8.0' and 41.0'-44.0' bgs.
No odor or staining observed.

Date Start: 11/7/2013
Date Finish: 11/7/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 78.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-49**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
25 -25				0.0					
				0.0					
				0.0					
	5	27.0-37.0	10.0	0.0			(27.0'-41.0') CLAY and SILT, medium to mom-plastic, slow dilatancy; some fine sand, trace granules to large pebbles, subround; moist; medium stiff to soft; grayish brown (10YR 5/2). NOTE: Glacial Till.		
30 -30				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					0.0-69.0' bgs. (Grout)
				0.0					0.0-73.0' bgs. (2.0" Sch. 40

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-8.0' and 41.0'-44.0' bgs.
No odor or staining observed.

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Date Start: 11/7/2013
Date Finish: 11/7/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 78.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-49**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					PVC Casing)
				0.0					
				0.0					
40 -40	6	37.0-47.0	9.0	0.0					
				0.0			(41.0'-42.0') SILT, little clay, non-plastic, rapid dilatancy; trace very fine sand, subround; wet; soft; gray (10YR 5/1).		
				0.0			(42.0'-44.0') SAND, coarse, some granules to large pebbles, subround; little silt; poorly sorted; wet; grayish brown (10YR 5/2).		
				0.0					
				0.0			(44.0'-49.0') CLAY and SILT, low to non-plastic, no dilatancy; some fine sand, trace granules to large pebbles, subround; dry to moist; stiff; gray (10YR 5/1).		
45 -45				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
50 -50	7	47.0-57.0	9.0	0.0			(49.0'-58.0') SAND, medium to fine, subround; trace silt; well sorted; dry; light brownish gray (10YR 6/2).		
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-8.0' and 41.0'-44.0' bgs.
No odor or staining observed.

Date Start: 11/7/2013
Date Finish: 11/7/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 78.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-49**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			(58.0'-73.0') CLAY and SILT, low to non-plastic, no dilatancy; little fine sand, trace granules to large pebbles, subround; dry; very stiff; dark gray (10YR 4/1).		
				0.0					
60 -60	8	57.0-67.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
65 -65				0.0					
				0.0					
				0.0					
				0.0					69.0-70.0' bgs. (Bentonite)
70 -70	9	67.0-74.0	7.0	0.0					70.0-72.0' bgs. (Filter Pack - K&E #0)
				0.0					
				0.0					
				0.0			(73.0'-78.0') SANDSTONE, pulverized with some large fragments, fine; light gray (10YR 7/1).		
				0.0					
				NA					
75 -75	10	74.0-78.0	0.0	NA					72.0-78.0' bgs. (Filter Pack - K&E #1)
				NA					73.0-78.0' bgs. (2.0" 10-Slot Stainless Steel Screen)

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-8.0' and 41.0'-44.0' bgs.
No odor or staining observed.

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Date Start: 11/7/2013
Date Finish: 11/7/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 78.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-49**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 40 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				NA					
80 -80							End of boring at 78.0' bgs.		
85 -85									
90 -90									
95 -95									

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-8.0' and 41.0'-44.0' bgs.
No odor or staining observed.

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Date Start: 10/30/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 107.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-50**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				0.0			(0.0'-0.75') ASPHALT.		
				0.0			(0.75'-12.0') CLAY and SILT, medium to high plasticity, no dilatancy; little to some very fine to fine sand, subround; trace to little granules to large pebbles, subround; moist; medium stiff; yellowish brown (10YR 6/2). NOTE: Glacial Till.		
	1	0.0-6.0	6.0	0.0					
				0.0					
				0.0					
5 / -5				0.0					
	2	6.0-10.0	4.0	0.0					
				0.0					
				0.0					
				0.0					
10 / -10	3	10.0-17.0	7.0	0.0			(12.0'-25.0') CLAY and SILT, low to non-plastic, no dilatancy; little fine to very fine sand, little granules to large pebbles, subround; dry to moist; very stiff; light brownish gray (10YR 6/2). NOTE: Glacial Till.		
				0.0					
				0.0					
				0.0					
15 / -15				0.0			NOTE: From Small very fine sand lense; moist from 15.5-15.7' bgs.		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

Date Start: 10/30/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 107.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-50**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
25 -25				0.0			(25.0'-39.0') CLAY and SILT; medium to high plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; moist; medium stiff to stiff; gray (10YR 5/1). NOTE: Glacial Till.		
				0.0					
	5	27.0-37.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
30 -30				0.0					
				0.0					
				0.0					
35 -35				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

Date Start: 10/30/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 107.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-50**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0			(39.0'-50.0') SAND, very fine to fine, subround; little silt; well sorted; dry; light gray (10YR 7/1).		0.0-85.0' bgs. (Cement Grout); 0.0-85.0' bgs. (4.0" Steel Casing)
45 -45				0.0					
50 -50	7	47.0-57.0	10.0	0.0			(50.0'-69.0') CLAY and SILT, low to non-plastic, no dilatancy; little fine sand, trace to little granules to small pebbles, subround; dry to moist; stiff to very stiff; gray (10YR 5/1).		
55 -55				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

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Date Start: 10/30/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 107.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-50**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-67.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			NOTE: Small to large sandstone fragments starting at 58.0' bgs.		
65 -65									
70 -70	9	67.0-77.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(69.0'-72.0') SANDSTONE, fine; light gray (10YR 7/2). NOTE: Mostly pulverized, some small to large fragments. (72.0'-107.0') SANDSTONE, and black SHALE, fine black laminations throughout the sandstone fragments.		
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

Date Start: 10/30/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 107.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-50**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	77.0-82.0	5.0	0.0 0.0 0.0 0.0 0.0					
	11	82.0-85.0	3.0	0.0 0.0 0.0					
85 -85				0.0 0.0 0.0 0.0 0.0 0.0 0.0					
90 -90	12	85.0-96.0	7.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0					
95 -95				0.0 0.0 NA					85.0-107.0' bgs. (3.0" Open Hole)

Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

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Date Start: 10/30/2013
Date Finish: 11/5/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 36.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 107.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-50**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
100-100	13	96.0-107.0	0.0	NA					
				NA					
				NA					
				NA					
				NA					
				NA					
				NA					
105-105				NA					
				NA					
				NA					
							End of boring at 107.0' bgs.		
110-110									
115-115									

Remarks: bgs = below ground surface
Groundwater encountered from 36.5'-41.0' and 64.0'-71.0' bgs.
No odor or staining observed.

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Date Start: 11/21/2013
Date Finish: 11/22/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 17.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 87.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-51**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.75') ASPHALT.		
	1	0.0-6.0	6.0	0.0			(0.75'-16.0') CLAY, some silt, high plasticity, no dilatancy; little very fine to fine sand; trace granules to large pebbles, subround; moist; stiff; yellowish brown (10YR 5/6).		
				0.0					
				0.0					
				0.0					
5 / -5				0.0					
	2	6.0-7.0	1.0	0.0					
	3	7.0-17.0	10.0	0.0					
				0.0					
				0.0					
10 / -10				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
15 / -15				0.0					
				0.0			(16.0'-16.25') SAND, fine to coarse, trace granules to small pebbles, subround; little silt; moist; poorly sorted; brownish yellow (10YR 6/8).		
				0.0			(16.25'-17.0') CLAY and SILT, low plasticity, no dilatancy; little very fine to fine sand; trace granules to large pebbles, subround; moist; stiff; grayish brown (10YR 5/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 17.0'-23.0' bgs.
No odor or staining observed.

Date Start: 11/21/2013
Date Finish: 11/22/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 17.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 87.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-51**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			NOTE: Glacial Till.		
				0.0			(17.0'-23.0') SAND, very fine to fine; trace granules to small pebbles, subround; and SILT, non-plastic, slow dilatancy; moist to wet; stiff; grayish brown (10YR 5/2).		
				0.0					
20 -20	4	17.0-27.0	10.0	0.0					
				0.0					
				0.0					
				0.0			(23.0'-41.0') CLAY, some silt, medium plasticity, no dilatancy; trace fine sand; trace granules to large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial Till.		
				0.0					
25 -25				0.0					
				0.0					
				0.0					
	5	27.0-37.0	10.0	0.0					
				0.0					
30 -30				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.0					
				0.0					0.0-73.0' bgs. (Grout)

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Remarks: bgs = below ground surface
Groundwater encountered from 17.0'-23.0' bgs.
No odor or staining observed.

Date Start: 11/21/2013
Date Finish: 11/22/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 17.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 87.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-51**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					0.0-77.0' bgs. (2.0" Sch. 40 PVC Casing)
				0.0					
				0.0					
40 -40	6	37.0-47.0	10.0	0.0					
				0.0			(41.0'-55.0') SAND, very fine, subround; little silt; well sorted; dry; light gray (10YR 7/2).		
				0.0					
				0.0					
				0.0					
45 -45				0.0					
				0.1					
				0.1					
				0.2					
				0.0					
50 -50	7	47.0-57.0	9.0	0.1					
				0.1					
				0.2					
				0.3					
				0.1					
55 -55				0.0			(55.0'-70.0') CLAY and SILT, low plasticity, no dilatancy; trace fine sand, trace granules to large pebbles, subround; dry to moist; stiff; gray (10YR 5/1).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 17.0'-23.0' bgs.
No odor or staining observed.

Date Start: 11/21/2013
Date Finish: 11/22/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 17.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 87.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-51
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-67.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
70 -70	9	67.0-75.0	7.0	0.0 0.0 0.2 0.4 0.6 0.5 0.0 0.1			(70.0'-81.0') SANDSTONE and SHALE, pulverized with little fragments.		73.0-74.0' bgs. (Bentonite) 74.0-76.0' bgs. (Filter Pack - K&E #0)
75 -75	10	75.0-77.0	2.0	0.0 0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 17.0'-23.0' bgs.
No odor or staining observed.

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Date Start: 11/21/2013
Date Finish: 11/22/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 17.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 87.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-51**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 50 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	11	77.0-81.0	4.0	0.0 0.0 0.0 0.0					
	12	81.0-87.0	6.0	0.0 0.0 0.0 0.0			(81.0'-85.0') SANDSTONE, very fine to fine; light gray (10YR 7/1). NOTE: Large cores with light gray mud in between sections.		76.0-87.0' bgs. (Filter Pack - K&E #1) 77.0-87.0' bgs. (2.0" 10-Slot Stainless Steel Screen)
85 -85				0.0 0.0			(85.0'-87.0') SANDSTONE and SHALE.		
90 -90							End of boring at 87.0' bgs.		
95 -95									

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Remarks: bgs = below ground surface
Groundwater encountered from 17.0'-23.0' bgs.
No odor or staining observed.

Date Start: 11/20/2013
Date Finish: 11/21/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 80.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-52**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	0.0 0.0 0.0 0.0 0.0 0.0			(0.0'-0.75') ASPHALT. (0.75'-12.0') CLAY and SILT, medium to high plasticity, no dilatancy; little to some very fine to fine sand; trace granules to large pebbles, subround; moist; stiff; yellowish brown (10YR 5/4). NOTE: Glacial Till.		
5 / -5	2	6.0-7.0	1.0	0.0					
10 / -10	3	7.0-17.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(12.0'-26.0') CLAY and SILT, low plasticity to non-plastic, no dilatancy; little fine sand, subround; little granules to large pebbles, subround; dry to moist; very stiff; light brownish gray (10YR 6/2).		
15 / -15									

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 11/20/2013
Date Finish: 11/21/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 80.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-52
Client: RACER
Location: RACER Lansing Plant 2
Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
25 -25				0.0					
				0.0			(26.0'-39.0') CLAY and SILT, medium to high plasticity, no dilatancy; little fine sand; trace granules to large pebbles, subround; moist; medium stiff; gray (10YR 5/1). NOTE: Glacial Till.		
	5	27.0-37.0	10.0	0.0					
30 -30				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.0					
				0.0					0.0-66.0' bgs. (Grout)
									0.0-70.0' bgs. (2.0" Sch. 40 PVC Casing)

Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

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Date Start: 11/20/2013
Date Finish: 11/21/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 80.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-52**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.1			(39.0'-52.0') SAND, very fine to fine, subround; little silt; well sorted; dry; light gray (10YR 7/1).		
40 -40	6	37.0-47.0	10.0	0.4					
				0.3					
				0.1					
				0.1					
				0.2					
45 -45				0.1					
				0.5					
				0.1					
				0.0					
				0.1					
50 -50	7	47.0-57.0	8.0	0.0					
				0.0					
				0.0			(52.0'-68.0') CLAY and SILT, low plasticity to non-plastic, no dilatancy; little very fine to fine sand; trace granules and large pebbles, subround; dry to moist; stiff to very stiff; gray (10YR 5/1).		
				0.0					
				0.0					
55 -55				0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

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Date Start: 11/20/2013
Date Finish: 11/21/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 80.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-52

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-67.0	10.0	0.0			NOTE: Large sandstone fragments at 57.0' bgs.		
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
65 -65				0.0					
				0.0					
				0.0					
				0.0			(68.0'-71.0') SANDSTONE, fine; light gray (10YR 7/2). NOTE: Large cores of sandstone.		
70 -70	9	67.0-76.0	9.0	0.0					
				0.0			(71.0'-80.0') SANDSTONE and black SHALE, pulverized.		
				0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					

66.0-67.0' bgs. (Bentonite)
67.0-69.0' bgs. (Filter Pack - K&E #0)
69.0-80.0' bgs. (Filter Pack - K&E #1)
70.0-80.0' bgs. (2.0" 10-Slot Stainless Steel Screen)

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 11/20/2013
Date Finish: 11/21/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 80.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-52**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	10	76.0-80.0	4.0	0.0 0.0 0.0					
80 -80							End of boring at 80.0' bgs.		
85 -85									
90 -90									
95 -95									

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 11/20/2013
Date Finish: 11/20/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 45.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 85.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-53**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	0.0 0.0 0.0 0.0 0.0 0.0			(0.0'-0.5') ASPHALT. (0.5'-8.5') CLAY, some silt, high plasticity, no dilatancy; trace to little fine sand, trace granules to large pebbles, subround; moist; stiff; yellowish brown (10YR 5/6). NOTE: Glacial Till.		
5 / -5	2	6.0-7.0	1.0	0.0					
10 / -10	3	7.0-17.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(8.5'-15.0') CLAY, some silt, high plasticity, no dilatancy; medium stiff; trace to little fine sand; trace granules to large pebbles, subround; moist; grayish brown (10YR 5/2). NOTE: Glacial Till.		
15 / -15				0.0 0.0			(15.0'-18.0') CLAY and SILT, low plasticity to non-plastic, no dilatancy; trace to little fine sand; trace granules to large pebbles, subround; dry to moist; stiff; grayish brown (10YR 5/2). NOTE: Glacial Till.		

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Remarks: bgs = below ground surface
Groundwater encountered from 45.0'-47.0' bgs.
No odor or staining observed.

Date Start: 11/20/2013 **Date Finish:** 11/20/2013 **Drilling Company:** Cascade **Driller's Name:** Mike Bond **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Core Barrel **Rig Type:** Sonic **Water Level Start (ft. bgs.):** 45.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** **Borehole Depth (ft. bgs.):** 85.0 **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **MW-13-53** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			(18.0'-19.0') SAND, fine to medium, subround; trace granules, subround; little silt; well sorted; dry to moist; light brownish gray (10YR 6/2).		
				0.0			(19.0'-30.0') CLAY and SILT, low plasticity to non-plastic, no dilatancy; trace fine sand; trace granules to large pebbles, subround; dry to moist; very stiff to hard; gray (10YR 5/1). NOTE: Glacial Till.		
20 -20	4	17.0-27.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
25 -25				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
	5	27.0-37.0	10.0	0.1					
30 -30				0.2			(30.0'-35.0') SAND, very fine, subround; some silt; dry; well sorted; light gray (10YR 7/1).		
				0.0					
				0.1					
				0.1					
				0.0					0.0-69.0' bgs. (Grout)
35 -35				0.0			(35.0'-40.0') SILT, slow to no dilatancy; some very fine sand, subround; moist; light brownish gray (10YR 6/2).		
				0.0					0.0-73.0' bgs. (2.0" Sch. 40

Remarks: bgs = below ground surface
Groundwater encountered from 45.0'-47.0' bgs.
No odor or staining observed.

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Date Start: 11/20/2013 **Date Finish:** 11/20/2013 **Drilling Company:** Cascade **Driller's Name:** Mike Bond **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Core Barrel **Rig Type:** Sonic **Water Level Start (ft. bgs.):** 45.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** **Borehole Depth (ft. bgs.):** 85.0 **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **MW-13-53** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					PVC Casing)
				0.0					
				0.0					
40 -40	6	37.0-47.0	10.0	0.0			(40.0'-45.0') CLAY and SILT, low plasticity, no dilatancy; trace to little fine sand; trace granules to large pebbles, subround; moist; medium stiff; gray (10YR 5/1). NOTE: Glacial Till.		
				0.0					
				0.0					
				0.0					
				0.0					
45 -45				0.0			(45.0'-47.0') SILT, non-plastic, slow to rapid dilatancy; some very fine sand, subround; most to wet; light brownish gray (10YR 6/2).	▼	
				0.0					
				0.0					
				0.0			(47.0'-51.0') CLAY and SILT, medium to low plasticity, no dilatancy; trace to little fine sand; trace granules to large pebbles, subround; moist; medium stiff; gray (10YR 5/1). NOTE: Glacial Till.		
				0.1					
				0.2					
50 -50	7	47.0-57.0	10.0	0.0					
				0.6			(51.0'-57.0') SAND, fine, subround; some silt; well sorted; dry to moist; pale brown (10YR 6/3).		
				0.7					
				0.7					
				0.4					
55 -55				0.8					
				0.2					

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Remarks: bgs = below ground surface
Groundwater encountered from 45.0'-47.0' bgs.
No odor or staining observed.

Date Start: 11/20/2013
Date Finish: 11/20/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 45.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 85.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: MW-13-53

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.1			(57.0'-61.0') CLAY and SILT, low plasticity, no dilatancy; little fine sand; little granules to large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial Till; some fragments of fine, light gray (10YR 7/1) sandstone.		
				0.0					
				0.0					
60 -60	8	57.0-67.0	10.0	0.0					
				0.0			(61.0'-64.5') SAND, very fine to fine, subround; trace granules to small pebbles, subround; some silt; poorly sorted; dry to moist; light brownish gray (10YR 6/2).		
				0.1					
				0.2					
				0.0			(64.5'-65.5') SAND, very fine to fine, subround; little silt; well sorted; dry; light gray (10YR 7/1).		
65 -65				0.3			(65.5'-68.0') SILT, some to little clay, low to non-plastic, no dilatancy; little fine sand; little granules to large pebbles, subround; moist; stiff; grayish brown (10YR 5/2). NOTE: Little fine, light gray (10YR 7/1) fragments of sandstone.		
				0.4					
				0.0					
				0.0			(68.0'-71.0') SANDSTONE, fine grained, light gray (10YR 7/1). NOTE: Large cores.		
				0.0					69.0-70.0' bgs. (Bentonite)
70 -70	9	67.0-76.0	8.0	0.0					
				0.0			(71.0'-80.5') SANDSTONE and SHALE, pulverized, light gray (10YR 7/1) and very dark gray (10YR 3/1).		70.0-72.0' bgs. (Filter Pack - K&E #0)
				0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 45.0'-47.0' bgs.
No odor or staining observed.

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Date Start: 11/20/2013
Date Finish: 11/20/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Core Barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 45.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 85.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **MW-13-53**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 30 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	76.0-85.0	9.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			(80.5'-82.0') SHALE, black (10YR 2/1). (82.0'-85.0') SANDSTONE with fine black (10YR 2/1) SHALE laminations, pulverized.		72.0-85.0' bgs. (Filter Pack - K&E #1) 73.0-83.0' bgs. (2.0" 10-Slot Stainless Steel Screen)
85 -85							End of boring at 85.0' bgs.		
90 -90									
95 -95									

Remarks: bgs = below ground surface
Groundwater encountered from 45.0'-47.0' bgs.
No odor or staining observed.

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Date Start/Finish: 3/28/13
Drilling Company: PM Environmental
Driller's Name: Steve Stelter
Drilling Method: Hand Auger/Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 450895.02
Easting: 13065282.12
Casing Elevation: NA

Borehole Depth: 10.0' bgs
Surface Elevation: 863.02

Descriptions By: A. Westhuis

Well/Boring ID: **SB-A5-LT95**

Client: RACER

Location: RACER Lansing Plant 2
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 860	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0 0.0			(0.0-6.0') CLAY, some silt, medium plasticity, no dilatancy to very slow dilatancy; little fine to medium sand, subrounded; trace small pebbles, subrounded; dry to moist; medium stiff; dark yellowish brown (10YR 4/6). Note: Fill.	Borehole backfilled with Bentonite.
5 / 855	2	5.0-10.0	3.3	0.0 0.0 0.0 0.0 0.0			(6.0-6.3') SAND, very fine to fine, subround; and SILT; well sorted; moist to wet; dark yellowish brown (10YR 4/6). Note: Fill. (6.3-10.0') CLAY, some silt, low plasticity, slow dilatancy; and SAND, very fine to fine, subrounded; soft; dark grayish brown (10YR 4/2).	
10 / 850							End of boring at 10.0' bgs.	
15								

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Remarks: bgs = below ground surface
Hand Auger from 0-5.0' bgs.
Groundwater encountered at 6.0' bgs.
No odor or staining observed.
Temporary well screened from 5.0-10.0' bgs.

Date Start/Finish: 3/27/13
Drilling Company: PM Environmental
Driller's Name: Steve, Brian
Drilling Method: Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 451680.523
Easting: 13065392.05
Casing Elevation: NA

Borehole Depth: 10.0' bgs
Surface Elevation:

Descriptions By: J. Ness

Well/Boring ID: **SB-A5.4-LQ186**

Client: RACER

Location: RACER Lansing Plant 2
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0								
				0.0			(0.0-0.5') ASPHALT.	
				0.0			(0.5-1.0') SAND, medium to coarse; and GRANULES, rounded to subrounded; little small pebbles, subrounded; poorly sorted; dry; dark brown (10YR 3/4).	
	1	0.0-5.0	3.1	0.0			(1.0-1.8') SAND, very fine to medium; well sorted; moist; yellowish brown (10YR 5/6). Note: Trace large pebbles, subrounded to subangular from 1.75-1.8' bgs.	
				0.0			(1.8-3.5') SAND, fine to medium; and CLAY, high plasticity, no dilatancy; poorly sorted; moist; dark grayish brown (10YR 4/2).	
				0.0			(3.5-6.0') SAND, fine to medium, little granules to small pebbles; some silt, slow dilatancy; poorly sorted; wet; brown (10YR 5/3).	
5 / -5				0.0				Borehole backfilled with Bentonite.
				0.0			Note: Little medium to large pebbles, subrounded to subangular from 5.5-6.0' bgs.	
				0.0			(6.0-10.0') CLAY, high plasticity, no dilatancy; little granules to small pebbles; dry; medium stiff to soft; dark gray (10YR 4/1).	
	2	5.0-10.0	3.7	0.0				
				0.0				
				0.0				
10 / -10							End of boring at 10.0' bgs.	
15 / -15								

Remarks: bgs = below ground surface
Groundwater encountered at 3.5' bgs.
No odor or staining observed.
Temporary well screened from 3.0-5.0' bgs.

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Date Start/Finish: 3/27/13
Drilling Company: PM Environmental
Driller's Name: Steve, Brian
Drilling Method: Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 451680.523
Easting: 13065392.05
Casing Elevation: NA

Borehole Depth: 10.0' bgs
Surface Elevation:

Descriptions By: J. Ness

Well/Boring ID: **SB-A5.4-MA191**

Client: RACER

Location: RACER Lansing Plant 2
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0								
				0.0			(0.0-0.75') CONCRETE.	Borehole capped with concrete.
				0.0			(0.5-9.0') SAND, fine to medium, little granules, rounded; trace small pebbles, rounded to subrounded; poorly sorted; dry; yellowish brown (10YR 5/6).	
	1	0.0-5.0	4.4	0.0				
				0.0				
				0.0			Note: Fill, moist at 4.0' bgs.	
5 / -5				0.0				Borehole backfilled with Bentonite.
				0.0			Note: Wet at 6.0' bgs.	
	2	5.0-10.0	4.0	0.0				
				0.0				
				0.0			(9.0-10.0') CLAY, high plasticity, no dilatancy; some granules to small pebbles, rounded to subrounded; trace medium pebbles, subangular; dry; stiff to medium stiff; dark grayish brown (10YR 4/2).	
10 / -10							End of boring at 10.0' bgs.	
15 / -15								

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Remarks: bgs = below ground surface
Hand Auger from 0-5.0' bgs.
Groundwater encountered at 6.0' bgs.
No odor or staining observed.
Temporary well screened from 5.0-10.0' bgs.

Date Start/Finish: 3/28/13
Drilling Company: PM Environmental
Driller's Name: Steve Stelter
Drilling Method: Hand Auger/Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 450993.978
Easting: 13066711.02
Casing Elevation: NA

Borehole Depth: 10.0' bgs
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **SB-A5.8-OG318**

Client: RACER

Location: RACER Lansing Plant 6
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0 0.0			(0.0-4.0') SAND, very fine to coarse; and GRANULES; some very large pebbles, subangular; some silt; poorly sorted; dry; light yellowish brown (10YR 6/4). Note: slight staining, very dark gray (10YR 3/1) from 3.7' to 4.0' bgs.	Borehole capped with concrete.
5 / -5	2	5.0-10.0	5.0	0.0 0.0 0.0 0.0 0.0			(4.0-10.0') CLAY, some silt, medium to high plasticity, no dilatancy; trace small to medium pebbles, subrounded; dry to moist; stiff; yellowish brown (10YR 5/6).	Borehole backfilled with Bentonite.
10 / -10							End of boring at 10.0' bgs.	
15 / -15								

Remarks: bgs = below ground surface
Groundwater not encountered.
No odor observed.

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Date Start/Finish: 3/27/13
Drilling Company: PM Environmental
Driller's Name: Steve Stelter
Drilling Method: Direct Push
Sampling Method: 5.0' Macrocore
Rig Type: Geoprobe

Northing: 449748.2477
Easting: 13065458.92
Casing Elevation: NA

Borehole Depth: 10.0' bgs
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **SB-A7-TB192**

Client: RACER

Location: RACER Lansing Plant 6
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0								
				0.0			(0.0-0.6') CONCRETE.	Borehole capped with concrete.
				0.0			(0.6-3.0') SAND, medium to coarse, trace granules to small pebbles, subrounded; trace silt; poorly sorted; moist to wet; yellowish brown (10YR 5/6). Note: Fill.	
	1	0.0-5.0	5.0	0.1				
				0.0			(3.0-10.0') CLAY, little silt, medium to high plasticity, slow dilatancy; trace to little fine to medium sand, subrounded; trace granules to small pebbles, subrounded; moist; medium stiff; grayish brown (10YR 4/2).	
				0.0				
5 / -5				0.0				Borehole backfilled with Bentonite.
				0.0				
	2	5.0-10.0	4.0	0.0				
				0.0				
				0.0				
10 / -10							End of boring at 10.0' bgs.	
15 / -15								

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Remarks: bgs = below ground surface
Groundwater encountered at 3.75' bgs.
No odor or staining observed.
Temporary well screened from 3.0-8.0' bgs.

SB-A11-HED

ARCADIS

Soil Boring Log

Boring No.: MW-28

Sheet: 1 of 5

Project Name: RACER - Lansing
Project Number: B0064480.2013.00106
Project Location: Lansing, MI

Date Started: 4-16-13
Date Completed:

Logger: C. Barton
Editor:
Weather Conditions: 40s, cloudy

Depth (feet)	Blow Counts	Sample ID & Time	Recovery (in.)	PID (ppm)	USCS Class.	Description	Construction Details
				NA		(0-2) CONCRETE	
2						(2-7) CLAY, high plasticity; little fine sand; moist; med stiff; brown (10YR 5/3).	
			5'	0.0		Note: Decrease plasticity at 3-4 ft; some sand.	
4				0.2		Note: Little granules to sm pebbles at 4 ft & below; SA	
				0.1		Note: Greenish gray coloration at 4 ft.	
6			2'	0.1			
				0.1		(7-16) CLAY, med/low plasticity; little fine sand; little granules; SA; little sm-med pebbles; SR; moist;	
8				0.0		stiff; dk yellowish brown (10YR 4/4).	
				0.0		(16-21) CLAY, high plasticity;	
10				0.0		little fine to coarse sand; SR; few sm-med pebbles; SR; moist; stiff;	
			9.5	0.1		dk grayish brown (10YR 4/2).	
12				0.0			
				0.1		Note: Soft at ~17-20 ft.	
14				0.2			
				0.1			
16				0.4		(21-30) CLAY, high plasticity; little fine sand; little sm to med pebbles; rounded; few silt; moist; ~~med stiff; dk grey (10YR 4/1)~~	
18				0.0			
				0.0		Note: Increase stiffness at 28 ft. Little granules; SA	
20							

Drilling Co.: Boart Longyear
Driller: Chris Barden
Drilling Method: Sonic
Drilling Fluid: Water ~~- with Bentonite Gel & Biologel~~
Remarks: H.A to 5 ft. → sand drilling mud
Hole abandoned by cement.

Sampling Method: Sonic 4"x8'
Sampling Interval: Continuous
Water Level Start:
Water Level Finish:
Converted to Well: ☒ Yes ☒ No
Surface Elev:
North Coor:
East Coor:

SB-A11 - WELL

ARCADIS

Soil Boring Log

Boring No.: [illegible]

Sheet: 2 of 5

Project Name:	RACER - Lansing	Date Started:		Logger:	C. Barton
Project Number:	B0064480.2013.00106	Date Completed:		Editor:	
Project Location:	Lansing, MI			Weather Conditions:	

Depth (feet)	Blow Counts	Sample ID & Time	Recovery (in.)	PID (ppm)	USCS Class.	Description	Construction Details
22			10'	0.0		Note: Wet sand seam at 28.5 ft; SAND, med to coarse; SR; little silt; trace granules to sm pebbles; SR; poorly sorted; moist; dk yellowish brown (10YR 4/4)	
				0.1			
				0.1			
24				0.0		(30 - 33) SAND, med to very coarse; SA/SR; little/some granules - sm pebbles; SA/SR; poorly sorted; moist; pale brown (10YR 6/3)	
				0.0			
26				0.0		(33 - 34.75) SAND, very fine to fine; trace sm pebble; SR; well sorted; moist; pale brown (10YR 6/3)	
				0.5			
28				0.2		(34.75 - 35.25) SILT, and very SAND, very fine; no dilatancy; well sorted; moist; yellowish brown (10 YR 5/4)	
				0.5			
30			10'	0.3		(35.25 - 36.5) SAND, fine; some med; trace granules to sm pebbles; SR; well sorted; moist; pale brown (10 YR 6/3). Note: Fines downward.	
				1.7			
32				1.5		(36.5 - 37) SILT, no dilatancy; some very fine sand; moist; stiff; yellowish brown & grey	
				0.5			
34				2.0		(37 - 39.5) SAND, fine; little med; trace very coarse; SR; little silt; well sorted; moist; pale brown (10YR 6/3)	
				0.5			
36				5.4		(39.5 - 42) SAND, med to coarse; SA; little very coarse to granule; SA/SR; trace silt; poorly sorted; moist; pale brown (10 YR 6/3)	
				8.1			
38				4.0		Note: Fining downwards	
40							

Remarks:

SB-ALL-1168

ARCADIS

Soil Boring Log

Boring No.: ~~MW-TB326~~

Sheet: 3 of 5

Project Name:	RACER - Lansing	Date Started:		Logger:	C. Barton
Project Number:	B0064480.2013.00106	Date Completed:		Editor:	
Project Location:	Lansing, MI			Weather Conditions:	

Depth (feet)	Blow Counts	Sample ID & Time	Recovery (in.)	PID (ppm)	USCS Class.	Description	Construction Details
42			10'	17.6		(42-43.5) SAND, fine to med; trace sm pebble; SR; well sorted; dry; light grey (10YR 7/2)	
				28.7			
44				12.1		(43.5-47) SAND, med to coarse; SR/SA; some veg coarse to granules; SR/SA; little sm-med pebbles; SR; poorly sorted; dry; light grey (10YR 7/2).	
				8.9			
46				31.0		Note: Fining downwards into little/some silt at 46 ft below.	
				27.6		Note: Bags were very hot in temp at 37-47 ft.	
48				0.0		(47-48.5) SAND, med to veg coarse; SR; and GRANULES, SR; some sm pebbles; SR; poorly sorted; moist; pale brown (10YR 6/3)	
				0.0			
50				0.0		Note: GRANULES & pebbles decrease to little at 48 ft.	
			10'	0.0			
52				0.0		(48.5-53) SAND, veg fine to fine; trace silt; well sorted; dry/moist; pale brown (10YR 6/3).	
				0.0			
54				0.0		(53-55) SAND, veg fine to fine; some med-coarse; SR; trace granules; SR; poorly sorted; dry/moist; pale brown (10YR 6/3)	
				0.0			
56				0.0		(55-60) SAND, veg fine to fine; trace silt; well sorted; moist; pale brown (10YR 6/3).	
				0.0			
58				0.0			
				0.0			
60				0.0			

SB-A11-4E78

ARCADIS

Soil Boring Log

Boring No.: ~~MW23778~~

Sheet: 4 of 5

Project Name:	RACER - Lansing	Date Started:		Logger:	C. Barton
Project Number:	B0064480.2013.00106	Date Completed:		Editor:	
Project Location:	Lansing, MI			Weather Conditions:	

Depth (feet)	Blow Counts	Sample ID & Time	Recovery (in.)	PID (ppm)	USCS Class.	Description	Construction Details
62			10'	0.0		(60-63.5) CLAY, high plasticity; little fine to med sand; little gravels to sm pebbles; SR/SA) most little silt; moist; stiff; gray (10YR5/1)	
				0.0		Note: Decrease plasticity at 62 & below; trace sm cobble	
64				0.0		(63.5-81) SILT, some very fine sand; no plasticity; slow dilatancy; moist; med stiff; grey (10YR5/1) to wet	
				0.0		Note: Trace sm pebble	
66				0.0			
				0.0		Note: No more pebbles at 67ft. Moist at 69ft below; Silt more consolidated; very stiff	
68				0.0		Trace clay at 70ft.	
				0.0			
70			10'	0.0		Note: Rapid dilatancy at 78-79ft.	
				0.0		(81-87) SILT, no dilatancy; low plasticity; little fine sand; little clay; moist; very stiff; dark grey (10YR 4/1) and reddish grey (5YR 5/2).	
72				0.0			
				0.0			
74				0.0			
				0.0		Note: Dry at 82-84 ftft.	
76				0.0			
				0.0			
78				0.0			
				0.0			
80							

SB-All -HE28

ARCADIS

Soil Boring Log

Boring No.: SB-All-HE28

Sheet: 5 of 5

Project Name:	RACER - Lansing	Date Started:		Logger:	C. Barton
Project Number:	B0064480.2013.00106	Date Completed:		Editor:	
Project Location:	Lansing, MI			Weather Conditions:	

Depth (feet)	Blow Counts	Sample ID & Time	Recovery (in.)	PID (ppm)	USCS Class.	Description	Construction Details
82			10'	0.0		(87-90) SAND, very fine to fine; trace silt; well sorted; wet; light grey (2.5YR 7/1).	
				0.0			
				0.0			
84				0.0		Note: weathered sandstone pieces within sand	
				0.0		(90-100) SANDSTONE, very fine to fine; well sorted; moist; light grey (2.5YR 7/1); weathered	
86				0.0			
				0.0		Note: Silty interbeds at 96ft.	
88				0.0			
				0.0			
90				0.0			
				0.0			
92			12.5'	0.0			
				0.0			
94				0.0			
				0.0			
96				0.0			
				0.0			
98				0.0			
				0.0			
100						EOB at 100ft bgs.	

Date Start/Finish: 3/26/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/ Mike Bond
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 95.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

Well/Boring ID: **SB-A11-HG24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0								
	1	0.0-5.0	5.0	0.0			(0.0-2.1') CONCRETE.	
				0.0			(2.1-5.0') CLAY, high plasticity; little fine sand, little medium to large pebbles, subangular; moist; medium stiff; brown (10YR 4/3).	
5 / -5				0.2			(5.0-19.0') CLAY, high plasticity, no dilatancy; little medium to coarse sand, subangular; little granules to small pebbles, subangular; trace medium to very large pebbles, subrounded; moist to dry; very stiff; yellowish brown (10YR 5/4) and grayish green.	
				0.0				
				0.1				
				0.2				
				0.1				
10 / -10				0.1				
	2	5.0-17.0	1.0	0.3				
				0.3				
				0.8				
				0.2			Note: Moist, medium stiff, grayish brown (10YR 5/2), at 14.0' bgs.	
15 / -15				0.2				
				0.2				
				0.2				
				0.0				

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3/26/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/ Mike Bond
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 95.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

Well/Boring ID: **SB-A11-HG24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0				
				0.0			(19.0-21.0') CLAY, some silt, medium plasticity, slow dilatancy; moist to wet; soft; yellowish brown.	
20 -20				0.0				
				0.0			(21.0-27.0') SAND, very fine to fine; little clay, high plasticity; poorly sorted; moist; yellowish brown.	
				0.0				
				0.0				
				0.0				
25 -25				0.1			Note: Some silt, moist to wet, rapid dilatancy, from 25.0-27.0' bgs.	
				0.1				
	3	17.0-37.0	20.0	0.0			(27.0-34.5') CLAY, high plasticity, no dilatancy; little fine sand, little granules, subangular; trace medium to very large pebbles, subangular; dry to moist; medium stiff; dark gray.	
				0.0				
				0.1				
30 -30				0.1			Note: Sand seam, medium, moist, little silt, at 30.0' bgs.	
				0.9				
				9.4				
				2.6				
				1.3			Note: Sand seam, fine, dry to moist, at 34.0' bgs.	
35 -35							(34.5-35.0') CLAY, low plasticity, no dilatancy; little fine sand; dry; stiff; grayish brown (10YR 5/2).	
				2.0			(35.0-37.0') SAND, very fine to fine, subrounded; trace coarse to small pebbles, subrounded; well sorted; dry; brown (10YR 5/3). Note: Increase in granules to small pebbles, poorly sorted, at 36.5' bgs.	
				7.6				
				0.1			(37.0-39.0') SAND, very fine to coarse, subrounded to subangular; some granules to medium pebbles, subrounded to subangular; trace silt; poorly sorted; moist; brown (10YR 4/3).	

Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

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Date Start/Finish: 3/26/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/ Mike Bond
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 95.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

Well/Boring ID: **SB-A11-HG24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.6				
				5.6			(39.0-43.0') SAND, very fine to coarse, subrounded to subangular; and GRANULES; some medium pebbles, subrounded to subangular; trace silt; poorly sorted; moist; brown (10YR 4/3).	
40 -40				3.6				
	4	37.0-46.0	8.9	1.8				
				2.0			(43.0-43.75') SAND, very fine to fine; little silt; well sorted; dry; pale brown (10YR 6/3).	
				4.6			(43.75-46.0') SAND, fine to medium; subangular; some very fine sand, little coarse sand to granules, subangular; trace small pebbles, subrounded; poorly sorted; dry; pale brown (10YR 6/3).	
45 -45				9.2				
				4.7				
				0.1			(46.0-49.0') SAND, very fine to fine; subrounded; trace granules, subangular; little silt; well sorted; moist; brown (10YR 5/3).	Boring backfilled with cement grout.
				3.0			Note: Trace small to large pebbles, subangular, from 48.0-49.0' bgs.	
				3.0			(49.5-50.5') SAND, fine to coarse, angular; trace granules to small pebbles, angular; poorly sorted; dry; pale brown. Note: Coasening downwards.	
50 -50	5	46.0-55.0	7.5				(50.5-51.0') SAND, medium to very coarse, subangular; and GRANULES, subrounded; some small pebbles, subangular to subrounded; poorly sorted; dry; pale brown (10YR 6/3).	
				2.8			Note: Silt layer, dry, from 50.6-50.8' bgs.	
							(51.0-53.0') SAND, very fine, trace to little granules to small pebbles, subrounded to subangular; poorly sorted; dry; pale brown (10YR 6/3).	
				1.8				
				8.3			(53.0-67.0') SILT, low plasticity, slow dilatancy; trace very fine sand; dry; brown (10YR 5/3). Note: Little very fine sand from 57.0' to 60.0' bgs.	
				7.9				
55 -55							Note: Color change to gray (10YR 5/1) at 55.0' bgs; trace small pebbles, angular from 55.0-56.0' bgs.	
				0.1				
	6	55.0-57.0	2.0					
				4.7				
				14.2				

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3/26/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/ Mike Bond
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 95.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

Well/Boring ID: **SB-A11-HG24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
60 -60				3.7				
				4.6				
				4.7			Note: Trace clay, medium plasticity, stiff to very stiff, little very fine sand, at 60.0' bgs. Note: Little very fine sand from 60.5-64.0' bgs.	
				0.3				
	7	57.0-67.0	10.0	0.4				
				0.7				
				2.9			Note: Some very fine sand from 64.0-66.0' bgs.	
65 -65				4.2				
				4.5			Note: little fine sand at 66.0-67.0' bgs	
				0.0			(67.0-73.5') SILT, low plasticity, slow dilatancy; little very fine sand; moist; stiff; dark gray (10YR 4/1).	
				0.0				
				0.0				
70 -70				0.1				
				0.1				
	8	67.0-77.0	10.0	0.2				
				0.2			(73.5-76.0') CLAY, some silt, medium plasticity, no dilatancy; dry; very stiff to hard; gray (10YR 5/1). Note: blocky.	
75 -75				0.3				
				0.4				
				0.4			(76.0-77.0') SILT, low plasticity to nonplastic, rapid dilatancy; little very fine sand; moist; medium stiff; dark gray (10YR 4/1).	
				0.3			(77.0-80.5') CLAY, some silt, medium plasticity, no dilatancy; some very fine sand; moist; stiff; gray (10YR 5/1). Note: intermittant laminations.	

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3/26/13
Drilling Company: Boart Longyear
Driller's Name: Scott Parks/ Mike Bond
Drilling Method: Hand Auger/Sonic
Sampling Method: Sonic
Rig Type: Sonic

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 95.0' bgs
Surface Elevation: NA

Descriptions By: C. Barton

Well/Boring ID: **SB-A11-HG24**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
80 -80				0.2			Note: Color change to gray and reddish gray (5YR 5/2) at 79.0' bgs.	
				0.3				
				0.0			Note: Sand layers, fine to medium, well sorted, moist; at 80.0' bgs and 80.5' bgs.	
				0.2			(80.5-87.0') CLAY, little silt, medium plasticity, no dilatancy; dry to moist; stiff; gray (10YR 4/1) and reddish gray (5YR 5/2).	
	9	77.0-87.0	10.0	0.9				
				1.4			Note: Moist at 83.0' bgs.	
85 -85				0.3				
				0.3				
				0.3			Note: Interbedded sand, very fine to fine, moist, at 86.0' bgs.	
				NA			(87.0-92.0') SILT, little clay, medium plasticity, rapid dilatancy; some very fine sand; moist; medium stiff; gray (10YR 4/1) and reddish gray (5YR 5/2). Note: wet in some areas but not saturated throughout.	
				0.0				
90 -90				0.0				
				0.2				
	10	87.0-95.0	8.0					
				0.2			(92.0-93.0') SAND, fine to medium; subrounded; little small to large pebbles, subrounded to subangular; poorly sorted; moist; gray (10YR 6/1).	
				0.0			(93.0-95.0') SANDSTONE, very fine to fine sand, subrounded; trace silt; well sorted; moist; gray (10YR 4/1). Note: weathered fragments.	
				0.0				
95 -95							End of boring at 95.0' bgs.	

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Remarks: bgs = below ground surface

Hand auger from 0.0-5.0' bgs.
Groundwater encountered at 77.0' bgs.
No staining or odor observed.

Date Start/Finish: 3/28/13
Drilling Company: PM Environmental
Driller's Name: Steve, Brian
Drilling Method: Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 454364.4334
Easting: 13064472.87
Casing Elevation: NA

Borehole Depth: 20.0' bgs.
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **SB-A12-BH94**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0								
	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0 0.0			(0.0-0.5') ASPHALT. (0.5-3.0') SAND, medium to coarse, little very coarse sand, trace small to large pebbles, subrounded; little silt; poorly sorted; wet; dark yellowish brown (10YR 4/4). (3.0-20.0') CLAY and SILT, medium to high plasticity, slow dilatancy; some fine to medium sand, subrounded; moist; medium stiff; grayish brown (10Yr 5/2). Note: soft from 5.0-6.0' bgs.	
5 / -5	2	5.0-9.0	3.0	0.0 0.0 0.0 0.0 0.0				
10 / -10	3	9.0-15.0	3.0	0.0 0.0 0.0 0.0 0.0			Note: Very fine to fine sand from 14.0-14.1' bgs and 14.8-14.9' bgs, moist.	Borehole backfilled with Bentonite.
15 / -15	4	15.0-20.0	4.0	0.0 0.0 0.0 0.0				

Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

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Date Start/Finish: 3/28/13
Drilling Company: PM Environmental
Driller's Name: Steve, Brian
Drilling Method: Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 454364.4334
Easting: 13064472.87
Casing Elevation: NA

Borehole Depth: 20.0' bgs.
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **SB-A12-BH94**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0 0.0			Note: Very soft to soft from 19.0' to 20.0' bgs.	
20 -20							End of boring at 20.0' bgs.	
25 -25								
30 -30								
35 -35								

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 7-10-2013
Date Finish: 7-10-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 25.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-A16-HU181**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 85, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0-1'	1.0	1.9	X		(0.0'-0.3') TOPSOIL/GRASS (0.3'-3.0') SAND, coarse to very coarse, subangular; little medium; little granules to small pebbles, subrounded; poorly sorted; dry; dark brown (10YR 4/1). NOTE: Fill		
	2	1-2'	1.0	1.1			NOTE: Trace glass at 1.0'-2.0' bgs.		
	3	2-3'	1.0	1.1					
	4	3-4'	1.0	0.2			(3.0'-10.0') SAND, fine to medium; little silt; little granules to small pebbles, subangular to angular; poorly sorted; wet; brown (10YR 4/3). NOTE: Trace metal.		
	5	4-5'	1.0	0.9	X				
5 / -5	6	5-10'	0.1	NA			NOTE: Poor recovery from 5.0'-10.0' bgs.		
10 / -10				0.0	X		(10.0'-14.0') CLAY, some silt, high plasticity, rapid dilatancy; wet; very soft; gray (10YR 5/1).		
				0.0					
	7	10-15'	4.1	0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 3.0'-24.0' bgs.
No odor or staining observed.

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Date Start: 7-10-2013
Date Finish: 7-10-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 25.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-A16-HU181**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 85, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.3					
				0.2			(14.0'-15.0') SILT, rapid dilatancy, little clay, little very fine sand; trace granules to small pebbles, subangular; wet; very soft; dark gray (5Y 4/1).		
15 -15									
				4.3			(15.0'-18.9') CLAY, some silt, slow dilatancy, medium plasticity; medium to large pebbles, subangular to subrounded; little very fine sand; wet; medium stiff; grayish brown (10YR 5/2).		
				0.8					
	8	15-20'	3.2	1.5					
				3.8					
				8.4			(18.9'-20.0') SAND, very fine to medium; little coarse, subangular; trace silt, poorly sorted; wet; gray (10YR 5/1).		
20 -20									
				0.3			(20.0'-24.0') CLAY, some silt, slow dilatancy, high plasticity; little very fine sand; trace small to medium pebbles, subangular; moist to wet; soft; grayish brown (10YR 5/2).		
				2.2					
	9	20-25'	4.0	4.2					
				1.2					
				1.5			(24.0'-25.0') CLAY, some silt, high plasticity, no dilatancy, little very fine sand, trace small pebbles, subangular to subrounded; moist; medium stiff; grayish brown (10YR 5/2).		
25 -25							End of boring at 25.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 3.0'-24.0' bgs.
No odor or staining observed.

Date Start: 7-10-2013
Date Finish: 7-10-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 25.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-A16-IL168**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 86, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0-1'	1.0	0.0			(0.0'-0.3') TOPSOIL/GRASS (0.3'-1.0') SAND, very fine to fine, little silt, trace clay; poorly sorted; dry; olive brown (2.5Y 4/5).		
	2	1-2'	1.0	0.0	X		(1.0'-2.0') SAND, fine to very coarse, little granules, subangular to angular, trace small to medium pebbles, poorly sorted; dry, dark brown (7.5YR 3/4).		
	3	2-3'	1.0	0.4			(2.0'-3.0') SAND, very fine to medium, little coarse to very coarse; trace small to medium pebbles, subangular; trace wood; poorly sorted; dry; very dark grayish brown (10YR 3/2).		
	4	3-4'	1.0	0.2			(3.0'-5.0') CLAY, low plasticity; some silt, no dilatancy, little very fine sand; trace small pebbles, subangular; moist; soft; grayish brown (2.5Y 5/2) with yellowish brown (10YR 5/6) mottling.		
	5	4-5'	1.0	0.5					
5 / -5				0.0	X		(5.0'-7.0') SILT, little clay, little very fine sand; trace granules to small pebbles, subangular to subrounded; dry; stiff; brown (10YR 4/3).		
	6	5-10'	2.4	0.0			(7.0'-10.1') CLAY, some silt, low plasticity, little very fine sand, trace medium pebbles, subrounded to subangular; dry, medium stiff, dark yellowish brown (10YR 4/6) with olive gray (5Y 4/2) mottling.		
				0.0					
				0.2					
10 / -10				0.0	X		(10.1'-12.0') SAND and SILT, very fine to fine, medium plasticity, rapid dilatancy; wet, soft, gray (10YR 3/1).		
				0.0					
	7	10-15'	4.0	0.6			(12.0'-15.0') SILT, little clay, medium plasticity, rapid dilatancy, little very fine sand; wet, soft, gray (10YR 5/1).		

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Remarks: bgs = below ground surface
Groundwater encountered from 10.1'-15.0' and 17.0'-25.0' bgs.
No odor or staining observed.

Date Start: 7-10-2013
Date Finish: 7-10-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 25.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-A16-IL168**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 86, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			NOTE: Sand and silt seam, medium to very coarse; wet; from 14.5'-14.7' bgs.		
15 -15							(15.0'-17.0') SILT and CLAY, no dilatancy, trace granules to small pebbles, subangular; moist; medium stiff; gray (10YR 5/2).		
				0.0					
				0.0					
	8	15-20'	3.9	0.0			(17.0'-19.5') SAND, very fine to coarse, some silt; rapid dilatancy; trace granules to small pebbles, subrounded to subangular; poorly sorted; wet; gray (10YR 5/1).		
				0.0					
				0.0			(19.5'-22.5') CLAY, some silt, little very fine sand, trace granules to small pebbles, subrounded to subangular, wet; gray (10YR 5/1).		
20 -20									
				0.0					
				0.0					
	9	20-25'	4.0	0.0			(22.5'-25.0') CLAY and SILT, rapid dilatancy; trace small to medium pebbles, subrounded to subangular; moist to wet, medium stiff, gray (10YR 5/1).		
				0.0					
				0.0					
25 -25							End of boring at 25.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 10.1'-15.0' and 17.0'-25.0' bgs.
No odor or staining observed.

Date Start/Finish: 3/27/13
Drilling Company: PM Environmental
Driller's Name: Steve, Brian
Drilling Method: Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 454355.9265
Easting: 13065110.91
Casing Elevation: NA

Borehole Depth: 20.0' bgs.
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **SB-A18-BJ158**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0								
				0.0			(0.0-0.5') CONCRETE.	Borehole capped with concrete.
				0.0			(0.5-3.0') SAND, fine, trace granules, subrounded; little to some silt; poorly sorted; dry; yellowish brown (10YR 5/6).	
	1	0.0-5.0	5.0	0.0				
				0.0			(3.0-12.0') CLAY, some silt, medium plasticity, no dilatancy; trace to little fine sand, subrounded; trace small pebbles, subrounded; dry to moist; medium stiff; yellowish brown (10YR 5/6).	
				0.0				
5 / -5				0.0				
				0.0				
	2	5.0-10.0	3.0	0.0				
				0.0				
				0.0				
10 / -10				0.1				Borehole backfilled with Bentonite.
				0.0			Note: Small, very fine to fine sand lenses from 11.2-11.4' bgs and 11.8-11.9' bgs, moist to wet.	
	3	10.0-15.0	3.0	0.0			(12.0-20.0') SAND, very fine to fine, subrounded, and SILT, nonplastic to low plasticity, slow dilatancy; well sorted; moist; soft; yellowish brown (10YR 5/6).	
				0.0				
				0.0				
15 / -15				0.0				
				0.0				
	4	15.0-20.0	2.0	0.0				

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start/Finish: 3/27/13
Drilling Company: PM Environmental
Driller's Name: Steve, Brian
Drilling Method: Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 454355.9265
Easting: 13065110.91
Casing Elevation: NA

Borehole Depth: 20.0' bgs.
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **SB-A18-BJ158**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0				
20 -20				0.0			End of boring at 20.0' bgs.	
25 -25								
30 -30								
35 -35								

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start/Finish: 3/27/13
Drilling Company: PM Environmental
Driller's Name: Steve, Brian
Drilling Method: Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 454194.7283
Easting: 13065341.97
Casing Elevation: NA

Borehole Depth: 20.0' bgs.
Surface Elevation:

Descriptions By: A. Westhuis

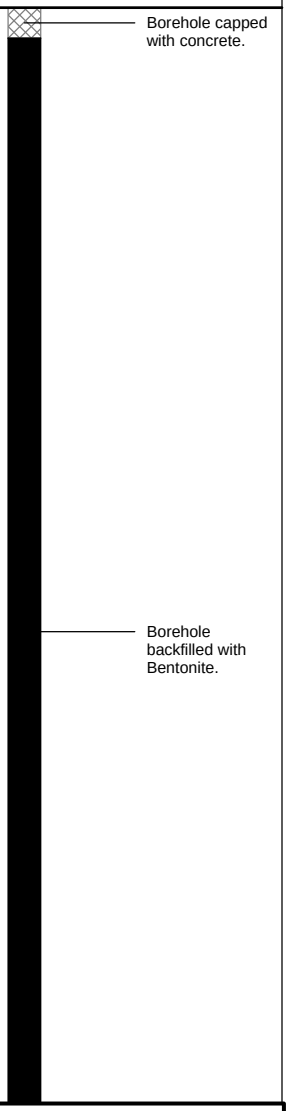
Well/Boring ID: **SB-A18-BY181**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description
0 / 0	1	0.0-5.0	5.0	0.0			(0.0-0.6') CONCRETE.
				0.0			(0.6-3.5') SAND, fine to medium, trace granules, subrounded; little silt; poorly sorted; dry to moist; yellowish brown (10YR 5/6). Note: Fill.
				0.0			
				0.0			(3.5-20.0') CLAY, some silt, medium plasticity, no dilatancy; trace to little fine to medium sand, subrounded; trace granules to small pebbles, subrounded; dry to moist; medium stiff; yellowish brown (10YR 5/6).
5 / -5	2	5.0-9.0	2.0	0.0			
				0.0			
				0.0			
				0.0			
10 / -10	3	9.0-15.0	2.0	0.0			Note: Soft, moist from 12.0 to 13.0' bgs.
				0.0			
				0.0			
				0.0			
15 / -15	4	15.0-20.0	2.0	0.0			
				0.0			
				0.0			

Well/Boring Construction



ARCADIS
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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start/Finish: 3/27/13
Drilling Company: PM Environmental
Driller's Name: Steve, Brian
Drilling Method: Direct Push
Sampling Method: 5.0' Dual Tube
Rig Type: Geoprobe

Northing: 454194.7283
Easting: 13065341.97
Casing Elevation: NA

Borehole Depth: 20.0' bgs.
Surface Elevation:

Descriptions By: A. Westhuis

Well/Boring ID: **SB-A18-BY181**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
				0.0				
				0.0				
20 -20							End of boring at 20.0' bgs.	
25 -25								
30 -30								
35 -35								

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 7-11-2013
Date Finish: 7-11-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 30.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-P3-BL78**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 75, Sunny

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0-1'	1.0	2.5			(0.0'-0.25') ASPHALT (0.25'-5.0') CLAY, low plasticity, little silt, little fine to medium sand; dry; medium stiff; very dark gray (10YR 3/1).		
	2	1-2'	1.0	4.1					
	3	2-3'	1.0	3.8					
	4	3-4'	1.0	1.7			NOTE: Color change to dark yellowish brown at 3.0' bgs; trace fine to medium sand.		
	5	4-5'	1.0	1.4					
5 / -5	6	5-10'	3.3	0.2			(5.0'-7.5') CLAY, low plasticity, little silt, no dilatancy, trace granules to small pebbles, subrounded to subangular; dry, brown (10YR 5/3).		
				0.2			NOTE: Moist at 6.0' bgs.; gray (10YR 6/1) mottling.		
				0.2			(7.5'-8.0') SAND, very fine to medium, little silt, trace granules to small pebbles, subrounded to subangular, trace clay; poorly sorted; wet; yellowish brown (10YR 5/4).		
				0.2			(8.0'-9.0') CLAY, non-plastic, little silt, trace granules to medium pebbles, subrounded to subangular; dry; stiff; dark yellowish brown (10YR 4/4).		
				0.2			(9.0'-14.0') SILT and SAND, low plasticity, slow dilatancy, very fine sand, little clay, trace granules to small pebbles, subrounded to subangular; moist; yellowish brown (10YR 5/4).		
10 / -10	7	10-15'	4.5	0.1					
				0.2					
				0.1					
				0.2					
				0.2			(14.0'-15.0') CLAY, low plasticity, no dilatancy, little silt, trace granules to small pebbles, subrounded to subangular; dry; stiff; yellowish brown (10YR 5/4).		
15 / -15				0.1			(15.0'-16.5') SILT and SAND, rapid dilatancy, very fine to fine; trace granules to medium pebbles, subrounded to subangular; poorly sorted; wet; yellowish brown (10YR 5/4).		

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Remarks: bgs = below ground surface
Groundwater encountered from 7.5'-8.0' and 15.0'-18.5' bgs.
No odor or staining observed.

Date Start: 7-11-2013
Date Finish: 7-11-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 30.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-P3-BL78**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 75, Sunny

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(16.5'-18.5') CLAY, some silt, medium plasticity, rapid dilatancy; trace granules to small pebbles; wet; soft; yellowish brown (10YR 5/4).		
	8	15-20'	4.7	0.0					
				0.0			(18.5'-20.5') CLAY, high plasticity, slow dilatancy, little silt; moist; medium stiff; dark grayish brown (10YR 4/2).		
20 -20				0.0					
				0.0			(20.5'-21.0') SILT, little clay, non-plastic, trace granules to small pebbles, subrounded to subangular; dry; stiff; dark yellowish brown (10YR 5/4).		
							(21.0'-21.5') SAND, very fine to fine; well sorted; dry; very pale brown (10YR 7/4).		
				0.1			(21.5'-25.0') SAND, very fine to fine, some silt, trace clay, poorly sorted; dry; light yellowish brown (10YR 6/4).		
	9	20-25'	5.0	0.1					
				0.2					
25 -25				0.0					
				0.0			(25.0'-26.5') SAND, very fine to fine, some silt, trace granules to small pebbles, subrounded to subangular, poorly sorted; dry, yellowish brown (10YR 5/4).		
				0.0			(26.5'-30.0') SILT, non-plastic; little very fine sand, trace granules to small pebbles, subrounded to subangular, poorly sorted; dry, grayish brown (10YR 5/2).		
	10	25-30'	4.5	0.1					
				0.0					
				0.0					
30 -30							End of boring at 30.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered from 7.5'-8.0' and 15.0'-18.5' bgs.
No odor or staining observed.

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Date Start: 7-11-2013
Date Finish: 7-11-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 30.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-P3-CE80**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 75, Sunny

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0-1'	1.0	1.4			(0.0'-0.2') TOPSOIL/GRASS (0.2'-1.0') SAND, very fine to fine, some silt, trace granules to small pebbles, subrounded to subangular, poorly sorted; moist; very dark grayish brown (10YR 3/2). NOTE: Trace roots.		
	2	1-2'	1.0	1.3					
	3	2-3'	1.0	3.3			(1.0'-3.0') SAND and CLAY, medium plasticity, very fine to fine, trace granules to small pebbles, subrounded to subangular; poorly sorted; moist; soft; dark yellowish brown (10YR 4/6).		
	4	3-4'	1.0	1.4			(3.0'-5.0') CLAY, some silt; little very fine sand, trace granules to small pebbles, subrounded to subangular; moist; dark grayish brown (10YR 4/2).		
	5	4-5'	1.0	1.8					
5 / -5	6	5-10'	5.0	0.4			(5.0'-8.0') CLAY, some silt, low plasticity; little very fine sand; little granules to small pebbles, subrounded to subangular; dry; stiff; olive gray (5Y 4/2).		
				0.4					
				0.3			NOTE: Color change to oilve brown (2.5Y 4/3) at 7.0' bgs.		
				0.3			(8.0'-9.0') CLAY, some silt, low to medium plasticity, no dilatancy, trace medium sand; trace granules to small pebbles, subrounded to subangular; moist; medium stiff; olive brown (2.5Y 4/4).		
				0.2			(9.0'-10.0') SILT and CLAY, medium plasticity, slow dilatancy; moist soft; dark gray (10YR 4/1).		
10 / -10	7	10-15'	3.2	0.0			(10.0'-14.0') CLAY, little silt, high plasticity, slow dilatancy; trace granules to small pebbles; moist; soft; olive gray (5Y 4/2).		
				0.0					
				0.0					
				0.0			(14.'0-16.0') CLAY, medium plasticity; little very fine to fine sand; trace granules, subangular; moist; olive brown (2.5Y 4/4).		
15 / -15				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 16.0'-18.0' and 27.5'-30.0' bgs.
No odor or staining observed.

Date Start: 7-11-2013
Date Finish: 7-11-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 30.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-P3-CE80**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 75, Sunny

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(16.0'-18.0') SILT and SAND, rapid dilatancy, very fine to medium, little clay, trace small pebbles, subrounded; poorly sorted; wet; soft; yellowish brown (10YR 5/6).		
	8	15-20'	5.0	0.0					
				0.0			(18.0'-25.0') CLAY, medium plasticity, trace silt, trace small to medium pebbles, subrounded to subangular; moist; medium stiff; dark gray (10YR 4/1).		
				0.0					
20 -20				0.0					
				0.0					
	9	20-25'	5.0	0.0					
				0.0					
				0.0					
25 -25				0.0			(25.0'-27.5') CLAY, high plasticity, little silt, slow to no dilatancy, trace very fine sand; trace granules to small pebbles, subrounded to subangular; moist, medium stiff; dark gray (10YR 4/1).		
				0.0					
	10	25-30'	5.0	0.0			(27.5'-30.0') SAND and SILT, low plasticity, slow dilatancy, very fine to fine, trace clay, trace granules to medium pebbles, subrounded to subangular; poorly sorted; wet; yellowish brown (10YR 5/4).		
				0.0					
				0.0					
30 -30							End of boring at 30.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 16.0'-18.0' and 27.5'-30.0' bgs.
No odor or staining observed.

Date Start: 7-10-2013
Date Finish: 7-10-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 30.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-P3-CN180**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 86, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0-1'	1.0	0.0			(0.0'-0.3') TOPSOIL/GRASS (0.3'-1.5') SAND, fine to medium; trace coarse to very coarse, subrounded to subangular; trace granules to small pebbles, subrounded; poorly sorted; dry; dark yellowish brown (10YR 4/6).		
	2	1-2'	1.0	0.0			(1.5'-7.0') CLAY, little silt, medium plasticity, no dilatancy; trace very fine sand; trace granules to small pebbles, subrounded to subangular; moist; medium stiff; yellowish brown (10YR 5/4). NOTE: Soft from 3.0'-4.0' bgs.		
	3	2-3'	1.0	0.0					
	4	3-4'	1.0	0.0					
	5	4-5'	1.0	0.3					
5 / -5	6	5-10'	4.3	0.0			(7.0'-7.5') SAND, fine to medium; little silt; poorly sorted; wet; dark yellowish brown (10YR 4/6). (7.5'-8.0') SAND, fine to medium, some granules to small pebbles, subangular to subrounded; poorly sorted; wet; dark yellowish brown (10YR 4/6). (8.0'-10.0') SILT and SAND, rapid dilatancy, very fine to fine; trace very coarse to granules; poorly sorted; wet; yellowish brown (10YR 5/6). NOTE: Sand seam from 9.0'-9.5', medium to coarse.		
10 / -10	7	10-15'	3.8	0.0			(10.0'-13.5') CLAY, little silt, low plasticity, slow dilatancy; trace very fine sand; trace granules to small pebbles, subrounded to subangular; moist; medium stiff; olive brown (2.5Y 4/3). (13.5'-15.0') CLAY, some silt, slow dilatancy; trace granules to small pebbles, subrounded to subangular; dry to moist; soft; gray (10YR 5/1).		
15 / -15				0.0			(15.0'-16.0') CLAY, some very fine sand; trace granules to small pebbles, subangular to subrounded; dry; stiff; dark yellowish brown (10YR 4/6).		

Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-10.0' bgs.
No odor or staining observed.
No recovery from 18.0'-20.0' bgs.

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Date Start: 7-10-2013
Date Finish: 7-10-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 30.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-P3-CN180**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 86, Partly Cloudy

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	8	15-18'	3.0	0.0 0.0			(16.0'-18.0') SAND, very fine to fine; well sorted; pale brown (10 YR 6/5).		
	9	18-20'	NR	0.0 0.0			(18.0'-20.0') No Recovery.		
20 -20	10	20-23'	3.0	0.0 0.0 0.0			(20.0'-23.0') CLAY, non-plastic, little very fine to fine sand; trace granules to small pebbles, subrounded to subangular; dry; stiff; brown (10YR 5/3). NOTE: Some silt, slow dilatancy; moist from 22.0'-23.0' bgs.		
	11	23-25'	1.7	0.0 0.0			(23.0'-24.5') CLAY, little silt, medium plasticity, slow dilatancy; little very fine sand; moist; soft; olive brown (2.5Y 4/3).		
25 -25	12	25-30'	2.8	0.0 0.0 0.0 0.0 0.0			(24.5'-30.0') SAND, fine to medium, little coarse; trace granules to medium pebbles, subrounded to subangular; poorly sorted; dry; yellowish brown (10YR 5/4).		
30 -30							End of boring at 30.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-10.0' bgs.
No odor or staining observed.
No recovery from 18.0'-20.0' bgs.

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Date Start: 7-11-2013
Date Finish: 7-11-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 30.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-P3-DM76**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 80, Sunny

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0-1'	1.0	1.2			(0.0'-0.3') TOPSOIL/GRASS (0.3'-2.0') SAND, very fine to fine, little silt, trace small pebbles, subrounded to subangular; trace clay, poorly sorted; moist; dark yellowish brown (10YR 4/4).		
	2	1-2'	1.0	1.7					
	3	2-3'	1.0	1.6			(2.0'-3.0') CLAY, trace silt, high plasticity; trace fine to medium sand; trace small to medium pebbles, subrounded; moist; soft; very dark gray (5Y 3/1).		
	4	3-4'	1.0	21.5			(3.0'-4.0') CLAY and SAND, non-plastic, very fine grained; trace small to medium pebbles, subrounded to subangular; dry; brown (10YR 5/3).		
	5	4-5'	1.0	3.3			(4.0'-6.0') CLAY, some silt, non-plastic; trace granules to medium pebbles, subrounded to subangular; dry; stiff; dark yellowish brown (10YR 4/6).		
5 / -5				0.0					
				0.0			(6.0'-10.0') SILT and SAND, rapid dilatancy; very fine to fine, trace clay, trace small to medium pebbles, subrounded; poorly sorted; wet; dark yellowish brown (10YR 4/6).		
	6	5-10'	2.0	0.0					
				0.0					
				0.0					
10 / -10				0.0			(10.0'-14.0') SILT, rapid dilatancy, some very fine sand; wet; grayish brown (10YR 5/2). NOTE: Interbedded sand seams, medium grained in (6-10') interval.		
				0.0					
	7	10-15'	2.8	0.0			NOTE: Little clay, no dilatancy, moist at 13.0' bgs.		
				0.0					
				0.0			(14.0'-15.0') SAND, medium to coarse, angular to subangular; little silt; wet; yellowish brown (10YR 5/4).		
15 / -15				0.0			(15.0'-16.3') SAND and CLAY, very fine to fine; trace small pebbles, subangular; moist, dark yellowish brown (10YR 4/4).		

Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-15.0' and 25.0'-30.0' bgs.
No odor or staining observed.

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Date Start: 7-11-2013
Date Finish: 7-11-2013
Drilling Company: PM
Driller's Name: Steve / Cliff
Drilling Method: Direct Push Dual Tube
Sampling Method: HA to 5.0' bgs / 5.0' Dual tube
Rig Type: Geoprobe 6610DT
Water Level Start (ft. bgs.):
Water Level Finish (ft. btoc.):

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 30.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **SB-P3-DM76**

Client: RACER

Location: RACER Lansing Plant 3
2801 West Saginaw
Lansing, MI 48909

Weather Conditions: 80, Sunny

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(16.3'-19.8') CLAY, little silt, high-plasticity, slow dilatancy; trace granules to small pebbles, subrounded to subangular; moist: soft; dark gray (10YR 4/1).		
	8	15-20'	4.5	0.0					
				0.1					
				0.0			(19.8'-20.2') CLAY, little silt, high plasticity, slow dilatancy; moist; soft; dark gray (10YR 4/1).		
20 -20									
				0.0			(20.2'-21.5') SAND, very fine to fine; well sorted; dry; pale brown (10YR 6/3).		
				0.0			(21.5'-25.0') SAND, very fine to fine, little silt, poorly sorted; dry; yellowish brown (10YR 5/6).		
	9	20-25'	3.2	0.0					
				0.0					
				0.0					
25 -25									
				0.0			(25.0'-26.0') SAND, very fine, some silt, rapid dilatancy; wet; yellowish brown (10YR 5/6).		
				0.0			(26.0'-30.0') CLAY and SILT, low plasticity, slow dilatancy; little very fine sand; trace granules to medium pebbles, subrounded to subangular; wet; medium stiff; dark gray (10YR 4/1)		
	10	25-30'	5.0	0.0					
				0.0					
				0.0					
30 -30							End of boring at 30.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-15.0' and 25.0'-30.0' bgs.
No odor or staining observed.

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Date Start/Finish: 3/28/13
Drilling Company: PM Environmental
Driller's Name: Steve Stelter
Drilling Method: Direct Push
Sampling Method: 5.0' Macrocore
Rig Type: Geoprobe

Northing: 451399.8373
Easting: 13066631.07
Casing Elevation: NA

Borehole Depth: 10.0' bgs
Surface Elevation:

Descriptions By: A. Villhauer

Well/Boring ID: **SB-P6-MS310**

Client: RACER

Location: RACER Lansing Plant 6
2801 West Saginaw
Lansing, MI 48909

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Well/Boring Construction
0 / 0								
				0.1			(0.0-0.5') CONCRETE.	Borehole capped with concrete.
				0.1			(0.5-2.0') SAND, medium to coarse, subrounded; trace small pebbles, subrounded; trace to little silt; poorly sorted; dry to moist; dark yellowish brown (10YR 4/4).	
	1	0.0-5.0	5.0	0.0			(2.0-10.0') CLAY, some silt, medium to high plasticity, no dilatancy; trace small pebbles, subrounded; trace fine sand, subrounded; dry to moist; medium stiff; yellowish brown (10YR 5/6).	
				0.0				
				0.0				
5 / -5				0.0				Borehole backfilled with Bentonite.
				0.0				
	2	5.0-10.0	5.0	0.0				
				0.0				
				0.0				
10 / -10							End of boring at 10.0' bgs.	
15 / -15								

Remarks: bgs = below ground surface
Groundwater not encountered.
No odor or staining observed.

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Date Start: 7/31/2013
Date Finish: 8/1/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-JN55

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Light Rain, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0-0.5') ASPHALT.		
	1	0.0-6.0	6.0	0.8 0.8 0.4 0.5 0.1 0.0			(0.5-4.5') CLAY, some silt, nonplastic, no dilatancy; little fine sand, subround; stiff; dry; dark brown (10YR 3/3). NOTE: Organic rich.		
5 / -5							(4.5-8.5') CLAY, some silt, high plasticity, no dilatancy; trace fine sand, trace granules to medium pebbles, subround; medium stiff; moist; gray (10YR 5/1).		
	2	6.0-7.0	1.0	0.0					
	3	7.0-17.0	10.0	0.0 0.0 0.2 0.0 0.1 0.0 0.0 0.1 0.0 0.0			(8.5-10.0') SAND, very fine to fine, subround; trace granules to small pebbles, subround; some silt, nonplastic, no dilatancy; well sorted; moist; brownish yellow (10YR 6/6). (10.0-16.5') CLAY, some silt, high plasticity, no dilatancy; trace to little fine sand, trace small to large pebbles, subround; stiff; moist; gray (10YR 5/1).		
10 / -10									
15 / -15									
							(16.5-17.0') SAND, very fine to fine, subround; little silt; well sorted; moist to wet; light gray (10YR 7/1).		

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Remarks: bgs = below ground surface
Groundwater encountered from 16.5'-17.0' and 68.5'-72.0' bgs.
No odor or staining observed.
No recovery from 30.0'-37.0' bgs.

Date Start: 7/31/2013 **Date Finish:** 8/1/2013 **Drilling Company:** Cascade **Driller's Name:** Mike Bond **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 72.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-JN55** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Light Rain, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0 0.0 0.0 0.0 0.1 0.1 0.0 0.0 0.0 0.0			(17.0-26.0') CLAY, some silt, high plasticity, no dilatancy; little fine sand; trace small to very large pebbles, subround; stiff; moist; gray (10YR 5/1). (26.0-30.0') SAND, very fine to fine, subround; little silt; well sorted; dry to moist; light gray (10YR 4/1).		
25 -25									
30 -30	5	27.0-37.0	4.0	0.1 0.0 0.0 NA NA NA NA NA NA NA			(30.0-37.0') No Recovery.		
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered from 16.5'-17.0' and 68.5'-72.0' bgs.
No odor or staining observed.
No recovery from 30.0'-37.0' bgs.

Date Start: 7/31/2013
Date Finish: 8/1/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-JN55**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Light Rain, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	9.0	0.1 0.1 0.6 0.4 0.5			(37.0-42.0') SAND, very fine to fine, subround; trace to little granules to large pebbles, subround; little silt; poorly sorted; dry; light gray (10YR 7/2).		
45 -45				0.1 0.0 0.0 0.0 0.0			(42.0-52.0') Weathered SANDSTONE and very fine to fine SAND, subround; well sorted; dry; light gray (10YR 7/1).		
50 -50	7	47.0-52.0	5.0	0.0 0.0 0.0 0.0 0.0					
55 -55	8	52.0-57.0	5.0	0.0 0.1 0.2 0.0 0.0			(52.0-54.0') SAND, very fine to medium, subround; little granules to large pebbles, subround; little to some silt; poorly sorted; dry; light brownish gray (10YR 6/2). (54.0-57.0') SAND, very fine to medium, subround; little to some granules to very large pebbles, subround; and SILT, nonplastic, no dilatancy; poorly sorted; dry; gray (!0YR 5/1). NOTE: Trace small fragments of weathered sandstone.		

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Remarks: bgs = below ground surface
Groundwater encountered from 16.5'-17.0' and 68.5'-72.0' bgs.
No odor or staining observed.
No recovery from 30.0'-37.0' bgs.

Date Start: 7/31/2013
Date Finish: 8/1/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-JN55

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Light Rain, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(57.0-59.0') SILT, nonplastic, no to slow dilatancy; trace very fine sand, subround; stiff; moist; dark gray (10YR 4/1).		
				0.1					
	9	57.0-67.0	9.0	0.0			(59.0-68.5') SILT, trace clay, nonplastic, no dilatancy; little to some fine to medium sand, subround; trace to little granules to very large pebbles, subround; very stiff; moist; dark gray (10YR 4/1). NOTE: Till.		
60 -60				0.0					
				0.0					
				0.1					
				0.0					
65 -65				0.1					
				0.0					
				0.0					
				0.0					
	10	67.0-72.0	5.0	0.0			(68.5-72.0') Weathered SANDSTONE fragments; and very fine to fine SAND, subround; well sorted; wet; light gray (10YR 7/2). NOTE: Small sandstone cores throughout sample.		
70 -70				0.0					
				0.0					
				0.0					
				0.0			End of boring at 72.0' bgs.		
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered from 16.5'-17.0' and 68.5'-72.0' bgs.
No odor or staining observed.
No recovery from 30.0'-37.0' bgs.

Date Start: 7/30/2013
Date Finish: 7/30/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-JO68
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0 0.0			(0.0-0.5') ASPHALT. (0.5-7.5') CLAY and SILT, low plasticity, no dilatancy; some fine to medium sand, subround; trace granules to very large pebbles, subround; stiff; dry to moist; dark grayish brown (10YR 4/2) to brown (10YR 4/3). NOTE: Some concrete, broick and slag fragments. Fill material.		
5 / -5	2	5.0-7.0	2.0	0.0 0.0					
10 / -10	3	7.0-17.0	8.0	2.3 8.4 5.1 17.6 53.1 28.1 4.2 5.1 3.3 2.0			(7.5-17.0') CLAY, nonplastic, no diltancy; moist; medium stiff; dark brown (10YR 3/3). NOTE: Trace wood fragments, organic rich, trace roots.		
15 / -15									

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Remarks: bgs = below ground surface
Groundwater encountered from 23.5'-25.0' and 42.0'-45.0' bgs.
No odor or staining observed.

Date Start: 7/30/2013 **Date Finish:** 7/30/2013 **Drilling Company:** Cascade **Driller's Name:** Mike Bond **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 76.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-JO68** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			(17.0-23.5') CLAY, little silt, low plasticity, no dilatancy; trace fine sand, subround; very soft; moist; gray (10YR 5/1).		
				0.0			(23.5-25.0') SAND, fine to very coarse, subround; little granules to large pebbles, subround; trace to little sitl; poorly sorted; wet; grayish brown (10YR 5/2).		
25 -25				0.0 0.0 0.0			(25.0-34.0') CLAY, some silt, medium plasticity, no dilatancy; little fine to medium sand, subround; trace granules to large pebbles, subround; medium stiff; moist; gray (10YR 5/1).		
30 -30	5	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0					
35 -35				0.0 0.0 0.0			(34.0-42.0') CLAY and SILT, low plasticity, no dilatancy; some fine sand, subround; trace granules to large pebbles, subround; stiff; moist; gray (10YR 5/1).		

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Remarks: bgs = below ground surface
Groundwater encountered from 23.5'-25.0' and 42.0'-45.0' bgs.
No odor or staining observed.

Date Start: 7/30/2013
Date Finish: 7/30/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-JO68

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0 0.0 0.0 0.0 0.1					
				0.1 0.0 0.0			(42.0-45.0') SAND, fine grained, subround; trace silt; well sorted; moist to wet; grayish brown (10YR 5/2).		
45 -45				0.6 0.0			(45.0-48.5') CLAY, some silt; medium to low plasticity, no dilatancy; little fine sand, subround; trace granules to large pebbles, subround; stiff; moist; gray (10YR 5/1).		
50 -50	7	47.0-57.0	10.0	0.0 0.0 0.2 0.7 1.0 1.1 0.3			(48.5-59.5') SAND, very fine to fine, trace medium sand, subround; trace granules to medium pebbles, subround; little silt; poorly sorted; dry; light gray (10YR 7/2).		
55 -55				0.6 0.8 1.1					

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Remarks: bgs = below ground surface
Groundwater encountered from 23.5'-25.0' and 42.0'-45.0' bgs.
No odor or staining observed.

Date Start: 7/30/2013
Date Finish: 7/30/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-JO68

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	8	57.0-67.0	10.0	0.0					
				0.0					
60 -60				0.0			(59.5-63.0') SILT, nonplastic, no to very slow dilatancy; some very fine to fine sand; trace granules, subround; stiff; moist; gray (10YR 5/1).		
				0.0					
				0.0					
				0.0			(63.0-63.5') SAND, fine to medium, subround; trace granules to small pebbles, subround; little silt; poorly sorted; moist; grayish brown (10YR 5/2).		
				0.0			(63.5-72.5') SILT, some clay, low plasticity to nonplastic, no dilatancy; trace to little very fine sand, subround; trace granules to very large pebbles; subround; moist; hard; gray (10YR 5/1).		
65 -65				0.1					
				0.0					
				0.0					
	9	67.0-76.0	9.0	0.0					
				0.0					
70 -70				0.0			NOTE: Weathered shale fragments from 70.0-72.5' bgs.		
				0.0					
				0.0					
				0.0			(72.5-76.0') SANDSTONE fragments, very fine to fine, subround; light gray (10YR 7/2).		
				0.0					
75 -75				0.0					
				0.0					
							End of boring at 76.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 23.5'-25.0' and 42.0'-45.0' bgs.
No odor or staining observed.

Date Start: 7/29/2013
Date Finish: 7/29/2013
Drilling Company: Cascade
Driller's Name: James VanConant
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 13.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-JU88
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0 0.0			(0.0-0.5') ASPHALT. (0.5-5.5') CONCRETE; red and orange brick; scrap metal; little to some granules to very large pebbles, subangular. NOTE: Fill material.		
5 / -5	2	5.0-7.0	2.0	0.0 0.0			(5.5-9.0') CLAY, some silt, medium plasticity, no dilatancy; little fine sand, subround; trace granules to very large pebbles, subround; medium stiff; grayish brown (10YR 5/2).		
	3	7.0-17.0	7.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(9.0-13.5') CLAY, little silt, high plasticity, no dilatancy; little fine sand, subround; trace granules to large pebbles, subronud; medium stiff; moist; gray (10YR 5/1). NOTE: little organic roots. (13.5-14.0') SAND, fine to very coarse, some granules to large pebbles, subround; trace to little silt; poorly sorted; wet; grayish brown (10YR 5/2). (14.0-33.0') CLAY, little silt, high plasticity, no dilatancy; little fine sand, subround; trace granules to large pebbles, subround; medium stiff; moist; gray (10YR 5/1).	▼	
10 / -10									
15 / -15									

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Remarks: bgs = below ground surface
Groundwater encountered from 13.5'-14.0', 33.0'-35.0', 77.0'-79.0' and 81.0'-82.0' bgs.
No odor or staining observed.

Date Start: 7/29/2013
Date Finish: 7/29/2013
Drilling Company: Cascade
Driller's Name: James VanConant
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 13.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-JU88**
Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.1			NOTE: Soft to very soft from 17.0-19.0' bgs.		
				0.0					
20 -20	4	17.0-27.0	8.0	0.2					
				0.0					
				0.0					
				0.0					
				0.0					
25 -25				0.0					
				0.1					
				0.1					
				0.2					
				0.0					
30 -30	5	27.0-37.0	9.0	0.0					
				0.0					
				0.0					
				0.0					
				0.1			(33.0-35.0') SAND, medium, subround; trace granules, subround; trace silt; well sorted; moist to wet; grayish brown (10YR 4/2).		
				0.2					
35 -35				0.0			(35.0-42.0') CLAY, some silt, medium plasticity, no dilatancy; little fine sand, subround; trace granules to large pebbles, subround; medium stiff to stiff; moist; gray (10YR 5/1).		
				0.1					

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Remarks: bgs = below ground surface
Groundwater encountered from 13.5'-14.0', 33.0'-35.0', 77.0'-79.0' and 81.0'-82.0' bgs.
No odor or staining observed.

Date Start: 7/29/2013 **Date Finish:** 7/29/2013 **Drilling Company:** Cascade **Driller's Name:** James VanConant **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** 13.5 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 82.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-JU88** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0 0.0 0.0 0.0 0.0					
				0.0			(42.0-47.5') SAND, very fine to medium; trace granules to large pebbles, subround; little silt; poorly sorted; dry; light gray (10YR 7/2).		
45 -45				0.0 0.0 0.0 0.0 0.0					
	7	47.0-57.0	9.0	0.0			(47.5-50.5') CLAY and SILT, low plasticity to nonplastic, no dilatancy; some fine sand; trace to little granules to very large pebbles, subround; stiff; dry to moist; gray (10YR 5/1).		
50 -50				0.1 0.0			(50.5-56.5') SAND, very fine to fine, subround; trace granules, subround; little silt; well sorted; dry; light gray (10YR 7/2).		
55 -55				0.0 0.0 0.0 0.0 0.0					
				0.0			(56.5-59.0') CLAY and SILT, low plasticity to nonplastic, no dilatancy; little fine sand;		

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Remarks: bgs = below ground surface
Groundwater encountered from 13.5'-14.0', 33.0'-35.0', 77.0'-79.0' and 81.0'-82.0' bgs.
No odor or staining observed.

Date Start: 7/29/2013 **Date Finish:** 7/29/2013 **Drilling Company:** Cascade **Driller's Name:** James VanConant **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** 13.5 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 82.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-JU88** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			trace granules to large pebbles, subround; stiff; dry to moist; gray (10YR 5/1).		
				0.0					
	8	57.0-67.0	9.0	0.0			(59.0-67.0') SILT, trace clay, nonplastic, no diltancy; some very fine to fine sand, trace granules to medium pebbles, subround; very stiff; dry; dark gray (10YR 4/1).		
60 -60				0.0					
				0.0					
				0.0					
				0.0					
				0.0			NOTE: Trace to liitle weathered shale fragments at 64.0' bgs.		
65 -65				0.0					
				0.0					
				0.0					
				0.0			(67.0-81.0') SILT, nonplastic, no dilatancy; trace very fine to fine sand, subround; trace granules, subround; hard; dry; gray (10YR 5/1). NOTE: Some shale and siltstone fragments.		
				0.0					
				0.0					
70 -70	9	67.0-77.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 13.5'-14.0', 33.0'-35.0', 77.0'-79.0' and 81.0'-82.0' bgs.
No odor or staining observed.

Date Start: 7/29/2013
Date Finish: 7/29/2013
Drilling Company: Cascade
Driller's Name: James VanConant
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 13.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-JU88**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 65 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	77.0-82.0	5.0	0.0 0.0 0.0 0.0 0.0			NOTE: Moist to wet from 77.0'-79.0' bgs. NOTE: Weathered sandstone fragments from 78.5'-80.0' bgs. (81.0'-82.0') SANDSTONE, very fine to fine, subround; wet; light gray (10YR 7/2).		
							End of boring at 82.0' bgs.		
85 -85									
90 -90									
95 -95									

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Remarks: bgs = below ground surface
Groundwater encountered from 13.5'-14.0', 33.0'-35.0', 77.0'-79.0' and 81.0'-82.0' bgs.
No odor or staining observed.

Date Start: 8/1/2013
Date Finish: 8/2/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-KH71

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0-0.5') ASPHALT.		
	1	0.0-6.0	6.0	1.2 0.4 0.5 0.1 0.4 0.2			(0.5-2.5') CLAY, some silt, low to medium plasticity, no dilatancy; little very fine sand, subround; stiff; dry to moist; grayish brown (10YR 5/2). NOTE: Some mottling brownish yellow (10YR 6/6). (2.5-5.0') SAND, medium, subround; trace to little granules to large pebbles, subround; little to some silt; poorly sorted; dry to moist; light yellowish brown (10YR 6/4). (5.0-10.0') CLAY, some silt, medium to high plasticity, no dilatancy; little fine to medium sand, subround; trace granules to large pebbles, subround; medium stiff to stiff; moist; brown (10YR 5/2).		
5 / -5	2	6.0-7.0	1.0	0.8					
	3	7.0-17.0	10.0	0.6 0.4 0.1 0.0 0.0 0.0 0.0 0.0 0.1 0.0			(10.0-15.0') CLAY, little silt, high plasticity, no dilatancy; trace to little fine sand, trace granules to very large pebbles, subround; medium stiff; moist; gray (10YR 5/1). (15.0-16.0') SAND, fine to medium, subround; little granules to large pebbles, subround; little silt; poorly sorted; wet; pale brown (10YR 6/3). (16.0-26.0') CLAY, little silt, high plasticity, no dilatancy; trace fine sand, trace to little granules to large pebbles, subround; medium stiff; moist; brown (10YR 5/3).		
10 / -10									
15 / -15									

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Remarks: bgs = below ground surface
Groundwater encountered from 15.0'-16.0', 26.0'-27.0' and 30.0'-30.5' bgs.
No odor or staining observed.

Date Start: 8/1/2013
Date Finish: 8/2/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-KH71

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0			(26.0-27.0') SAND, very fine to fine, subround; trace granules, subround; little to some silt; well sorted; wet; light brownish gray (10YR 6/2).		
25 -25							(27.0-44.0') CLAY and SILT, low plasticity, no dilatancy; little fine to medium sand; trace granules to very large pebbles, subround; stiff to very stiff; moist; gray (10YR 5/1).		
30 -30	5	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0					
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered from 15.0'-16.0', 26.0'-27.0' and 30.0'-30.5' bgs.
No odor or staining observed.

Date Start: 8/1/2013
Date Finish: 8/2/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-KH71

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.1 0.0 0.0 0.0 0.1 0.0 0.1 0.4 0.6 0.8			(44.0-53.0') SAND, very fine to fine, subround; trace granules, subround; trace silt; well sorted; dry to moist; light gray (10YR 4/2).		
45 -45									
50 -50	7	47.0-57.0	6.0	0.6 0.3 1.2 0.1 0.0 0.4 0.3 1.3 0.8 0.6			(53.0-58.0') SAND, fine to medium, subround; trace granules to small pebbles, subround; trace silt; well sorted; dry; light gray (10YR 7/2).		
55 -55									

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Remarks: bgs = below ground surface
Groundwater encountered from 15.0'-16.0', 26.0'-27.0' and 30.0'-30.5' bgs.
No odor or staining observed.

Date Start: 8/1/2013
Date Finish: 8/2/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-KH71**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			(58.0-70.0') SILT, some clay, nonplastic to low plasticity, no dilatancy; trace to little fine sand, subround; trace graules to large pebbles, subround; very stiff to hard; moist; dark gray (10YR 4/1). NOTE: Trace small to large very fine to fine grained sandstone fragments; light gray (10YR 7/1).		
	8	57.0-67.0	10.0	0.0					
60 -60				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
65 -65				0.0					
				0.0					
				0.0					
	9	67.0-70.0	3.0	0.1					
				0.0					
70 -70				0.0					
				0.0			(70.0-75.0') SANDSTONE, very fine to fine grained, subround; light gray (10YR 7/1). NOTE: Large cores of sandstone with some silt.		
	10	70.0-75.0	5.0	0.0					
				0.0					
				0.0					
75 -75				0.0			End of boring at 75.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 15.0'-16.0', 26.0'-27.0' and 30.0'-30.5' bgs.
No odor or staining observed.

Date Start: 8/6/2013
Date Finish: 8/7/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 7.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: VAP-P2-KK56

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0-0.3') ASPHALT.		
	1	0.0-6.0	6.0	0.0			(0.3-2.5') CLAY, little silt, low plasticity; trace fine sand; medium stiff; dry; dark gray (10YR 4/1) with greenish gray mottling (GLEY 1 5GY 5/1).		
				0.0					
				1.5			(2.5-3.5') PEAT, trace roots; very dark brown (10YR 2/2).		
				0.0			(3.5-7.0') CLAY, little silt, high plasticity, no dilatancy; soft; moist; dark gray (5Y 4/1).		
5 / -5				0.0					
				0.0					
	2	6.0-7.0	1.0	0.6					
				0.0			(7.0-8.0') SAND, fine to medium; trace granules to small pebbles, subround to subangular; little silt; poorly sorted; wet; grayish brown (10YR 5/2).	▼	
				0.0			(8.0-10.0') CLAY, high plasticity, no dilatancy; soft; moist; grayish brown (10YR 5/2). NOTE: Laminated silt seams.		
				0.0					
10 / -10	3	7.0-17.0	10.0	0.0			(10.0-18.5') CLAY, little silt, high plasticty; trace very fine sand, trace granules to medium pebbles, subround to subangular; medium stiff; dry; grayish brown (10YR 5/2). NOTE: Till.		
				0.0					
				0.0					
				0.0			NOTE: Sand layer at 13.5' bgs.		
15 / -15				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-8.0', 18.0'-23.0', 24.0'-24.5', at 26.0', from 56.0'-60.5' bgs.
No odor or staining observed.

Date Start: 8/6/2013 **Date Finish:** 8/7/2013 **Drilling Company:** Cascade **Driller's Name:** Mike Bond **Drilling Method:** HA to 6.0'/RotoSonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** 7.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 72.0' bgs **Surface Elevation:** **Descriptions By:** C.Snyder	**Well/Boring ID:** **VAP-P2-KK56** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
20 -20	4	17.0-27.0	10.0	0.0			(18.5-23.0') SAND, very fine to fine; little silt; well sorted; wet; grayish brown (10YR 5/2).		
				0.0					
				0.0					
				0.0			(23.0-27.0') CLAY, little silt, high plasticity, no dilatancy; little very fine to fine sand, trace granules to small pebbles, subround to subangular; medium stiff; moist; grayish brown (10YR 5/2) with brown (7.5YR 4/4) mottling. NOTE: Till. NOTE: SAND seam, fine to medium; little silt; wet; from 24.0-24.5' and at 26.0' bgs.		
25 -25				0.0					
				0.0					
				0.0					
				0.0			(27.0-43.0') CLAY, some silt, low plasticity; trace fine sand, trace granules to medium pebbles, subangular; stiff; dry; grayish brown (10YR 5/2). NOTE: Till.		
30 -30	5	27.0-37.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-8.0', 18.0'-23.0', 24.0'-24.5', at 26.0', from 56.0'-60.5' bgs.
No odor or staining observed.

Date Start: 8/6/2013
Date Finish: 8/7/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 7.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: VAP-P2-KK56
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0					
				0.0			(43.0-45.0') SILT, little clay, nonplastic; medium stiff; dry; gray (10YR 6/1).		
45 -45				0.0 1.3 2.1			(45.0-47.0') SAND, very fine to fine ; little silt; well sorted; dry; light grayish brown (10YR 6/2).		
	7	47.0-57.0	10.0	0.0 0.0 0.0 0.0			(47.0-51.0') CLAY, little silt, nonplastic, no dilatancy; trace granules to medium pebbles, subround to subangular; stiff; dark gray (10YR 4/1).		
50 -50				0.8 0.6 0.6 0.6			(51.0-56.0') SAND, very fine to fine, little silt; well sorted; dry; gray (10YR 6/1).		
55 -55				0.4					
				0.7			(56.0-60.5') SAND, medium to coarse, little very coarse sand; trace granules to medium pebbles, subround; poorly sorted; wet; grayish brown (10YR 5/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-8.0', 18.0'-23.0', 24.0'-24.5', at 26.0', from 56.0'-60.5' bgs.
No odor or staining observed.

Date Start: 8/6/2013
Date Finish: 8/7/2013
Drilling Company: Cascade
Driller's Name: Mike Bond
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 7.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **VAP-P2-KK56**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-62.0	5.0	0.0 0.0 0.0 0.0 0.0					
							(60.5-70.0') CLAY, some silt, nonplastic, no dilatancy; trace very fine to fine sand, trace granules to medium pebbles, subround to subangular; stiff; dark gray (10YR 4/1). NOTE: Till.		
65 -65	9	62.0-67.0	5.0	0.0 0.0 0.0 0.0 0.0			NOTE: Sandstone fragments from 66.0-70.0' bgs.		
	10	67.0-72.0	5.0	NA NA NA					
70 -70				NA NA			(70.0-72.0') Weatherer SANDSTONE, fine; soft; light gray (10YR 7/1).		
							End of boring at 72.0' bgs.		
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-8.0', 18.0'-23.0', 24.0'-24.5', at 26.0', from 56.0'-60.5' bgs.
No odor or staining observed.

Date Start: 8/5/2013
Date Finish: 8/5/2013
Drilling Company: Cascade
Driller's Name: Jim, Scott, Michael
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 26.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **VAP-P2-KL90**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	0.0 0.0 6.0 0.0 0.0 0.0			(0.0-0.3') ASPHALT. (0.3-7.0') CLAY, some silt, low plasticity; trace medium pebbles, subround to subangular; medium stiff; dry; dark yellowish brown (10YR 4/4).		
5 / -5	2	6.0-7.0	1.0	0.0					
10 / -10	3	7.0-17.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(7.0-27.0') CLAY, little silt, medium plasticity, no dilatancy; trace fine sand; trace granules to medium pebbles, subround to subangular; soft; grayish brown (10YR 5/2). NOTE: Yellowish brown mottling from 7.0-11.0' bgs. NOTE: Till.		
15 / -15									

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Remarks: bgs = below ground surface
Groundwater encountered at 26.0', from 27.0'-28.0', 40.0'-41.5' and 71.0'-75.0' bgs.
No odor or staining observed.

Date Start: 8/5/2013
Date Finish: 8/5/2013
Drilling Company: Cascade
Driller's Name: Jim, Scott, Michael
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 26.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: VAP-P2-KL90

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			NOTE: Medium stiff at 18.0' bgs.		
20 -20	4	17.0-27.0	10.0	0.0					
25 -25				0.0			NOTE: Silt seam; dry; at 25.0' bgs.		
				0.0			NOTE: Medium to coarse sand seam with trace small to medium pebbles; wet; at 26.0' bgs.	▼	
				0.0			(27.0-28.0') SAND, medium to very coarse, little granules to small pebbles, angular; little silt; poorly sorted; wet; grayish brown (10YR 5/2).		
				0.0			(28.0-29.0') CLAY, little silt, medium plasticity; trace graunles to medium pebbles, subangular to angular; medium stiff; dry; grayish brown (10YR 5/2).		
30 -30	5	27.0-37.0	10.0	0.0			(29.0-36.0') CLAY, high plasticity; soft; dry; grayish brown (10YR 5/2). NOTE: Laminated silt layers.		
35 -35				0.0			(36.0-40.0') SILT, some clay, low plasticity; trace very fine to fine sand, little graunles; trace small to medium pebbles, subround to subangular; medium stiff; grayish brown (10YR 5/2).		

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Remarks: bgs = below ground surface
Groundwater encountered at 26.0', from 27.0'-28.0', 40.0'-41.5' and 71.0'-75.0' bgs.
No odor or staining observed.

Date Start: 8/5/2013
Date Finish: 8/5/2013
Drilling Company: Cascade
Driller's Name: Jim, Scott, Michael
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 26.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **VAP-P2-KL90**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0					
				0.0					
				0.0					
				0.0			(40.0-41.5') SAND, very fine to fine, trace very coarse sand to granules, subround to subangular; trace small to medium pebbles, subround to subangular; some silt, rapid dilatancy; poorly sorted; wet; grayish brown (10YR 5/2).		
				0.0			(41.5-49.0') SILT, some clay, nonplastic; little very fine to fine sand, trace granules to medium pebbles, subround to subangular; stiff; dry; gray (10YR 5/1). NOTE: Till.		
				0.0					
				0.0					
45 -45				0.0					
				0.0					
				0.0					
	7	47.0-57.0	10.0	0.0					
				0.0					
				0.5			(49.0-55.0') SAND, very fine to fine; little silt, no dilatancy; well sorted; dry; grayish brown (10YR 5/2).		
50 -50				0.4					
				0.5					
				0.4					
				0.4					
				0.2					
55 -55				0.2			(55.0-57.5') SAND, fine to medium, little coarse sand to very coarse sand; trace small pebbles, subround to subangular; poorly sorted; moist; gray (10YR 6/1).		
				0.2					

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Remarks: bgs = below ground surface
Groundwater encountered at 26.0', from 27.0'-28.0', 40.0'-41.5' and 71.0'-75.0' bgs.
No odor or staining observed.

Date Start: 8/5/2013 **Date Finish:** 8/5/2013 **Drilling Company:** Cascade **Driller's Name:** Jim, Scott, Michael **Drilling Method:** HA to 6.0'/RotoSonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** 26.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 75.0' bgs **Surface Elevation:** **Descriptions By:** C.Snyder	**Well/Boring ID:** **VAP-P2-KL90** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(57.5-59.0') CLAY, little silt, medium plasticity; trace small to large pebbles, subround; stiff; moist; gray (10YR 6/1).		
	8	57.0-62.0	5.0	0.0			(59.0-60.0') SAND, little medium sand, trace granules to medium pebbles, subround to subangular; and SILT, low plasticity, no dilatancy; medium stiff; moist; gray (10YR 5/1).		
60 -60				0.0			(60.0-65.0') SAND, very fine to fine, little small to large pebbles, subround; little silt; poorly sorted; moist; dark gray (10YR 4/1).		
				0.0					
	9	62.0-66.0	4.0	0.0			NOTE: Little clay from 63.0-64.0' bgs.		
65 -65				0.0			(65.0-71.0') CLAY, little silt, nonplastic; trace small pebbles, subangular to angular; very stiff; dry; dark gray (10YR 4/1).		
	10	66.0-69.5	3.5	0.0					
				0.0					
70 -70	11	69.5-71.0	1.0	0.0					
				0.0					
	12	71.0-75.0	4.0	NA			(71.0-75.0') SANDSTONE, fine; soft; light gray (10YR 7/1). NOTE: Interbedded silt layers, wet. NOTE: Weathered bedrock.		
				NA					
				NA					
75 -75				NA					
							End of boring at 75.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered at 26.0', from 27.0'-28.0', 40.0'-41.5' and 71.0'-75.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-KP110

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.5') ASPHALT.		
	1	0.0-2.0	2.0	0.0			(0.5'-6.0') CLAY, little silt, low plasticity, no dilatancy; trace very fine to fine sand; light gray (2.5Y 7/0).		
	2	2.0-4.0	2.0	0.0					
							NOTE: Wet at 4.0' bgs.	▼	
5 / -5	3	4.0-6.0	2.0	0.0					
	4	6.0-7.0	1.0	0.0			(6.0'-9.0') SILT, clay, non-plastic, rapid dilatancy; trace very fine sand; moist; soft; light olive brown (2.5Y 5/6).		
				0.0					
							(9.0'-11.0') SAND, fine to coarse, subangular to subround; poorly sorted; wet; light olive brown (2.5Y 5/6).		
10 / -10	5	7.0-17.0	10.0	0.0					
							(11.0'-17.0') CLAY, some silt, low plasticity, slow dilatancy; moist; medium stiff; dark gray (2.5Y 4/1).		
				0.0					
				0.0					
15 / -15				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0', from 9.0'-11.0', 29.0'-31.0', at 67.0' and 78.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-KP110**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.4			(17.'0-29.0') CLAY, little silt, medium plasticity, no dilatancy; trace very fine sand to coarse sand; trace small pebbles; moist; medium stiff; dark grayish brown (2.5Y 4/2).		
20 -20	6	17.0-27.0	10.0	1.3					
				0.1					
				0.3					
25 -25				1.1					
				0.8					
30 -30	7	27.0-37.0	10.0	0.7			(29.9'-31.0') SAND, very fine to coarse, subround; trace silt and clay, low plasticity; poorly sorted; wet; dark grayish brown (2.5Y 4/2).		
				4.3			(31.0'-33.0') CLAY, low plasticity, slow dilatancy; little silt; moist; very stiff; dark grayish brown (2.5Y 4/2).		
				2.4			(33.0'-37.0') SILT and CLAY, non-plastic, slow to rapid dilatancy; moist; stuff; gray (10YR 5/1).		
35 -35				3.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0', from 9.0'-11.0', 29.0'-31.0', at 67.0' and 78.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-KP110**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				2.0			(37.0'-50.0') SILT and CLAY, low plasticity, slow dilatancy; little small to large pebbles; trace very fine to coarse sand, subround; moist; hard; dark grayish brown (10YR 4/2).		
40 -40	8	37.0-47.0	10.0	1.3					
				1.4					
				0.0					
45 -45				0.1					
				0.8					
50 -50	9	47.0-57.0	10.0	0.3			(50.0'-57.0') SAND, very fine to medium, subround to subangular; well sorted; dry; pale brown (10YR 6/3).		
				0.0					
				0.0					
55 -55				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0', from 9.0'-11.0', 29.0'-31.0', at 67.0' and 78.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-KP110
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				4.3			(57.0'-70.0') SAND, very fine to coarse, subround; well sorted; pale brown (10YR 6/3).		
60 -60	10	57.0-67.0	10.0	4.6					
				1.7			NOTE: Dense from 62.0'-62.3' bgs.		
				1.2					
65 -65							NOTE: Color change to light grayish gray (2.5Y 6/2) from 65.0'-67.0' bgs.		
				0.8					
							NOTE: Wet at 67.0' bgs.		
				1.2					
70 -70	11	67.0-77.0	10.0	0.0			(70.0'-73.0') SILT, trace clay, non-plastic, slow dilatancy; trace very fine to coarse sand, trace small pebbles; moist; stiff; light yellowish brown (2.5Y 6/2).		
				0.0					
							(73.0'-76.0') CLAY, some silt, medium plasticity, no dilatancy; trace very fine to coarse sand, trace small pebbles; moist; hard; gray (2.5Y 5/0).		
				0.4					
75 -75									
				0.3			(76.0'-76.5') SAND, very fine to fine, subround; well sorted;		
							(76.5'-82.0') SANDSTONE, weathered, fine to medium grained; well sorted; moist;		

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0', from 9.0'-11.0', 29.0'-31.0', at 67.0' and 78.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-KP110**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
							grayish brown (2.5Y 5/2).		
	12	77.0-82.0	5.0	201.6			NOTE: Wet at 78.0' bgs.		
80 -80				401.4					
				309.2					
							End of boring at 82.0' bgs.		
85 -85									
90 -90									
95 -95									

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0', from 9.0'-11.0', 29.0'-31.0', at 67.0' and 78.0' bgs.
No odor or staining observed.

Date Start: 8/8/2013
Date Finish: 8/8/2013
Drilling Company: Cascade
Driller's Name: S. Parkes,A.Roberts.,W.Gordon
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: A.Richmond

Well/Boring ID: VAP-P2-KV56

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0-0.4') ASPHALT.		
	1	0.0-6.0	6.0	0.2 0.2 0.2 0.2			(0.4-7.0') CLAY, high plasticity, no dilatancy; trace small pebbles, subangular; medium stiff; moist; dark gray (5Y 4/1). NOTE: Color change to olive brown (2.5Y 4/6) with light olive brown mottling (2.5Y 5/4) at 3.0' bgs.		
5 / -5	2	6.0-7.0	0.9						
	3	7.0-17.0	10.0	0.0 0.0 0.0 0.0			(7.0-12.0') CLAY, low plasticity, slow dilatancy; little small pebbles, subangular; medium stiff; dry; dark grayish brown (2.5Y 4/2). NOTE: Till. (12.0-15.0') CLAY, medium plasticity, rapid dilatancy; little medium sand, little small pebbles, subangular to subround; soft; wet; dark grayish brown (2.5Y 4/2).	▼	
10 / -10									
15 / -15				0.0			(15.0-17.0') SAND, medium, subangular, little coarse sand, subangular; little medium pebbles, angular; little clay; poorly sorted; wet; dark grayish brown (2.5Y 4.2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-17.0', 20.0'-21.0', 24.0'-27.0' and 70.0'-72.0' bgs.
No odor or staining observed.

Date Start: 8/8/2013
Date Finish: 8/8/2013
Drilling Company: Cascade
Driller's Name: S. Parkes,A.Roberts.,W.Gordon
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: A.Richmond

Well/Boring ID: VAP-P2-KV56
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(17.0-20.0') SILT, nonplastic, no dilatancy; little fine sand, trace small pebbles, subround; stiff; dry; dark grayish brown (2.5Y 4/2).		
20 -20	4	17.0-27.0	10.0	0.0			(20.0-21.0') SAND, medium, subangular to subround; little granules, subround; trace small cobble, subround; poorly sorted; wet; dark grayish brown (2.5Y 4/2).		
				0.0			(21.0-24.0') SILT, nonplastic, rapid dilatancy; little fine sand; trace small pebbles, subround; stiff; moist; daqrk grayish brown (2.5Y 4/2).		
25 -25				0.0			(24.0-27.0') SAND, fine, subangular to subround; little granules, subangular; little clay; poorly sorted; wet; dark grayish brown (2.5Y 4/2). NOTE: Sand seams; wet; at 25.0' and 26.0' bgs.		
				0.0			(27.0-47.0') SILT, nonplastic, no dilatancy; litlle small pebbles, subround; stiff; dry; dark grayish brown (2.5Y 4/2). NOTE: Till.		
30 -30	5	27.0-37.0	10.0	0.0					
				0.0					
35 -35				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-17.0', 20.0'-21.0', 24.0'-27.0' and 70.0'-72.0' bgs.
No odor or staining observed.

Date Start: 8/8/2013
Date Finish: 8/8/2013
Drilling Company: Cascade
Driller's Name: S. Parkes,A.Roberts.,W.Gordon
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: A.Richmond

Well/Boring ID: VAP-P2-KV56
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	6	37.0-47.0	10.0	0.0 0.0 0.0 0.0 0.0					
45 -45									
50 -50	7	47.0-57.0	10.0	0.0 0.9 0.3 0.2 0.4			(47.0-50.0') SAND, fine, subround; little silt; poorly sorted; moist; dark gray (10YR 4/1). (50.0-56.0') SAND, medium, subangular to subround; trace granules, subangular to subround; trace silt; well sorted; dry; grayish brown (10YR 5/2). (56.0-57.0') SAND, fine, subangular to subround; trace medium pebbles, subround; trace silt; poorly sorted; dry; gray (10YR 6/1).		
55 -55									

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Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-17.0', 20.0'-21.0', 24.0'-27.0' and 70.0'-72.0' bgs.
No odor or staining observed.

Date Start: 8/8/2013
Date Finish: 8/8/2013
Drilling Company: Cascade
Driller's Name: S. Parkes,A.Roberts.,W.Gordon
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: A.Richmond

Well/Boring ID: VAP-P2-KV56

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-62.0	5.0	0.3 0.2 0.2			(57.0-57.5') SILT, nonplastic, no dilatancy; little small pebbles, subround; medium stiff; dry; very dark grayish brown (10YR 3/2). NOTE: Till. (57.5-58.0') SAND, fine, subangular to subround; trace granules, subround; well sorted; dry; dark grayish brown (10YR 4/2). (58.0-59.0') SILT, nonplastic, no dilatancy; little small pebbles, subround; trace very fine sand; medium stiff; dry; dark grayish brown (10YR 3/2). NOTE: Till. (59.0-59.5') SAND, fine, subangular to subround; well sorted; dry; light gray (2.5Y 7/1). NOTE: Weathered sandstone. (59.5-70.0') SILT, non-plastic, no dilatancy; little medium pebbles, subround; very stiff; dry; dark grayish brown (10YR 4/2). NOTE: Till.		
65 -65	9	62.0-67.0	5.0	0.6 0.8					
70 -70	10	67.0-72.0	5.0	1.8 0.6 0.8			(70.0-72.0') Weathered BEDROCK/SANDSTONE, fine grained; wet; light gray (5Y 7/1).		
75 -75							End of boring at 72.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered from 12.0'-17.0', 20.0'-21.0', 24.0'-27.0' and 70.0'-72.0' bgs.
No odor or staining observed.

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Date Start: 8/5/2013
Date Finish: 8/6/2013
Drilling Company: Cascade
Driller's Name: Jim, Scott, Michael
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 42.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **VAP-P2-KV73**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	0.0 0.0 0.0 0.0 0.0 0.0			(0.0-0.4') ASPHALT. (0.4-7.0') CLAY, little silt, medium plasticity, no dilatancy; trace fine to medium sand, trace granules, subangular; medium stiff; moist; brown (10YR 5/3); with yellowish brown mottling (10YR 5/4).		
5 / -5	2	6.0-7.0	1.0	0.0					
	3	7.0-17.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(7.0-22.5') CLAY, high plasticity; trace very fine to fine sand, trace granules to small pebbles, subround to subangular; soft; moist; brown (10YR 5/3).		
10 / -10									
15 / -15									

Remarks: bgs = below ground surface
Groundwater encountered at 42.0' bgs.
No odor or staining observed.
No recovery from 35.0'-37.0' bgs.

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Date Start: 8/5/2013
Date Finish: 8/6/2013
Drilling Company: Cascade
Driller's Name: Jim, Scott, Michael
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 42.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: VAP-P2-KV73
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.2			(22.5-28.0') CLAY, high plasticity; soft; moist; grayish brown (10YR 5/2). NOTE: Laminated silt layers.		
25 -25									
30 -30	5	27.0-37.0	8.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(28.0-35.0') CLAY and SILT, low plasticity, no dilatancy; little very fine sand, trace granules to small pebbles, subangular; medium stiff; moist; grayish brown (10YR 5/2). (35.0-37.0') No recovery - pushed medium cobble, subround to subangular.		
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered at 42.0' bgs.
No odor or staining observed.
No recovery from 35.0'-37.0' bgs.

Date Start: 8/5/2013
Date Finish: 8/6/2013
Drilling Company: Cascade
Driller's Name: Jim, Scott, Michael
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 42.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: VAP-P2-KV73

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				NA			(37.0-43.0') CLAY and SILT, low plasticity, no dilatancy; little very fine sand, trace granules to small pebbles, subangular; medium stiff; moist; grayish brown (10YR 5/2).		
				NA			NOTE: Stiff, nonplastic at 38.0' bgs.		
40 -40	6	37.0-47.0	10.0	NA					
				0.0			NOTE: Very large pebbles, subround to subangular at 40.0' bgs.		
				0.0					
				0.0			NOTE: SAND and SILT layer; wet; at 42.0' bgs.	▼	
				0.8			(43.0-44.0') SAND, very fine to fine; little silt; well sorted; moist; brown (10YR 5/3).		
				0.0			(44.0-46.0') CLAY, little silt, nonplastic; trace small to large pebbles, subround to subangular; stiff; dry; grayish brown (10YR 5/2).		
45 -45				0.0					
				0.9			(46.0-47.0') SAND, very fine to fine; trace silt; well sorted; dry; light gray (10YR 7/1).		
				0.9			(47.0-54.5') SAND, fine to medium, little coarse sand to granules, subround to subangular; poorly sorted; dry; grayish brown (10YR 5/2).		
				1.0					
				1.6					
50 -50	7	47.0-57.0	10.0	1.9					
				2.0					
				1.9					
				1.9					
				0.0			(54.5-57.0') CLAY; little silt, nonplastic, slow dilatancy; trace small to large pebbles, subround to subangular; soft; moist; gray (10YR 5/1). NOTE: Till.		
55 -55				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 42.0' bgs.
No odor or staining observed.
No recovery from 35.0'-37.0' bgs.

Date Start: 8/5/2013
Date Finish: 8/6/2013
Drilling Company: Cascade
Driller's Name: Jim, Scott, Michael
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 42.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: C.Snyder

Well/Boring ID: **VAP-P2-KV73**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	8	57.0-62.0	5.0	0.0 0.0 0.0 0.0 0.0			(57.0- 60.0') SAND, very fine to fine, trace medium pebbles, subround; some clay, little silt; poorly sorted; dry; dark gray (10YR 4/1). (60.0-62.0') SILT, little clay, nonplastic, slow dilatancy; trace small to large pebbles, subangular; medium stiff; moist; dark gray (10YR 4/1).		
60 -60	9	62.0-67.0	5.0	0.0 0.0 0.0 0.0 0.0			(62.0-68.0') CLAY and SILT, nonplastic, no dilatancy; trace small to large pebbles, subround to subangular; stiff; moist; dark gray (10YR 4/1).		
65 -65	10	67.0-70.0	3.0	0.0 0.0 0.0			(68.0-72.0') SANDSTONE, fine; soft ; gray (10YR 6/1). NOTE: Interbedded SILT and CLAY; dark gray (10YR 4/1); from 68.0-70.0' bgs.		
70 -70	11	70.0-72.0	2.0	0.0 0.0					
							End of boring at 72.0' bgs.		
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered at 42.0' bgs.
No odor or staining observed.
No recovery from 35.0'-37.0' bgs.

Date Start: 8/7/2013
Date Finish: 8/8/2013
Drilling Company: Cascade
Driller's Name: S. Parkes
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 5.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: C. Snyder/A.Richmond

Well/Boring ID: VAP-P2-KW91

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0-0.4') ASPHALT.		
	1	0.0-6.0	6.0	0.0			(0.4-6.0') CLAY, little silt, low plasticity, no dilatancy; dry, medium stiff; dark greenish gray (GLEY 1 10GY 4/1).		
				0.0					
				0.0					
				0.0					
5 / -5				0.0			NOTE: Wet seam; with dark yellowish brown mottling (10YR 4/4) at 5.5' bgs.	▼	
	2	6.0-7.0	0.0	NA			(6.0-7.0') Push soil down; no recovery.		
	3	7.0-17.0	10.0	0.3			(7.0-12.0') CLAY, trace silt, high plasticity, no dilatancy; wet; soft; dark gray (2.5Y 4/1). NOTE: Light olive brown (2.5Y 5/6) mottling.		
				0.2					
10 / -10				0.3			(12.0-12.5') SAND, coarse, subangular to subround, little medium sand, subangular; little small pebbles, subround; poorly sorted; wet; light olive brown (2.5Y 5/4).		
							(12.5-30.0') CLAY, trace silt, medium plasticity, slow dilatancy; trace small pebbles, subround; dry; medium stiff; dark grayish brown (2.5Y 4/2).		
				0.3			NOTE: Olive gray (5Y 5/2) mottling from 14.0-15.0' bgs.		
15 / -15				0.2					

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Remarks: bgs = below ground surface
Groundwater encountered at 5.5', from 7.0'-12.5', 30.0'-34.0', 60.5'-61.0' and 79.0'-82.0' bgs.
No odor or staining observed.
No recovery from 6.0'-7.0' bgs.

Date Start: 8/7/2013 **Date Finish:** 8/8/2013 **Drilling Company:** Cascade **Driller's Name:** S. Parkes **Drilling Method:** HA to 6.0'/RotoSonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** 5.5 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 82.0' bgs **Surface Elevation:** **Descriptions By:** C. Snyder/A.Richmond	**Well/Boring ID:** **VAP-P2-KW91** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	NA NA 0.0 0.0 0.0					
25 -25									
30 -30	5	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.0			(30.0-34.0') SAND, fine, subround to subangular; trace granules, subround; and CLAY, medium plasticity; poorly sorted; wet; dark grayish brown (2.5Y 4/2). (34.0-37.0') CLAY, low plasticity, slow dilatancy; little granules, subangular; dry; stiff; dark grayish brown (2.5Y 4/2).		
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered at 5.5', from 7.0'-12.5', 30.0'-34.0', 60.5'-61.0' and 79.0'-82.0' bgs.
No odor or staining observed.
No recovery from 6.0'-7.0' bgs.

Date Start: 8/7/2013
Date Finish: 8/8/2013
Drilling Company: Cascade
Driller's Name: S. Parkes
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 5.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: C. Snyder/A.Richmond

Well/Boring ID: VAP-P2-KW91

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(37.0-40.0') CLAY, high plasticity, no dilatancy; little granules, subangular; dry; soft; dark grayish brown (2.5Y 4/2).		
40 -40	6	37.0-47.0	10.0	0.0			(40.0-42.0') CLAY, low plasticity, rapid dilatancy; little fine sand, little small pebbles, angular; moist; very soft; dark grayish brown (2.5Y 4/2).		
				0.0			(42.0-45.0') CLAY, little silt, nonplastic, slow dilatancy; little medium pebbles, angular; dry; dark grayish brown (2.5Y 4/2). NOTE: Till.		
45 -45				0.0			(45.0-47.0') CLAY, high plsaticity, no dilatancy; dry; soft; dark grayish brown (10YR 4/2).		
				0.0			(47.0-57.0') CLAY, nonplastic, slow dilatancy; little medium pebbles, subangular to subround; little granules, subangular; trace large pebbles, subround; dry; hard; dark gray (10YR 4/1). NOTE: Till.		
50 -50	7	47.0-57.0	10.0	0.0					
				0.0					
				0.0					
55 -55				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 5.5', from 7.0'-12.5', 30.0'-34.0', 60.5'-61.0' and 79.0'-82.0' bgs.
No odor or staining observed.
No recovery from 6.0'-7.0' bgs.

Date Start: 8/7/2013
Date Finish: 8/8/2013
Drilling Company: Cascade
Driller's Name: S. Parkes
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 5.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: C. Snyder/A.Richmond

Well/Boring ID: VAP-P2-KW91

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	8	57.0-67.0	5.0	0.0			(57.0-60.5') SILT, nonplsatic, rapid dilatancy; little medium pebbles, subangular to subround; dry; hard; dark gray (10YR 4/1).		
							(60.5-61.0') SAND, fine; and CLAY, low plasticity; poorly sorted; wet; dark gray (10YR 4/1).		
				0.0			(61.0-62.0') SAND, fine, subangular to subround; little medium sand, subangular; well sorted; dry; dark grayish brown (10YR 4/2).		
				0.0			(62.0-66.0') SAND, medium, subangular to subround; little fine sand, subround; little pebbles, subangular; little granules, subangular; poorly sorted; moist; dark grayish brown (10YR 4/2).		
65 -65				0.0			(66.0-70.0') SILT, trace clay, nonplastic, no dilatancy; little small pebbles, subangular; dry; very stiff; dark grayish brown (10YR 4/2). NOTE: Till.		
	9	67.0-72.0	5.0	0.0					
70 -70				0.0			(70.0-79.0') SILT, nonplastic, no dilatancy; little medium pebbles, subangular; trace small cobble, subround; dry; hard; very dark grayish brown (2.5Y 3/2). NOTE: Till.		
				0.0			NOTE: Interbedded sandstone, small to medium pebbles; weathered from 72.0-79.0' bgs.		
	10	72.0-77.0	5.0	0.0					
75 -75				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 5.5', from 7.0'-12.5', 30.0'-34.0', 60.5'-61.0' and 79.0'-82.0' bgs.
No odor or staining observed.
No recovery from 6.0'-7.0' bgs.

Date Start: 8/7/2013
Date Finish: 8/8/2013
Drilling Company: Cascade
Driller's Name: S. Parkes
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 5.5
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: C. Snyder/A.Richmond

Well/Boring ID: **VAP-P2-KW91**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
80 -80	11	77.0-82.0	5.0	0.0			(79.0-82.0') BEDROCK/SANDSTONE, fine grained; wet; light gray (5Y 7/1).		
				0.0					
							End of boring at 82.0' bgs.		
85 -85									
90 -90									
95 -95									

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Remarks: bgs = below ground surface
Groundwater encountered at 5.5', from 7.0'-12.5', 30.0'-34.0', 60.5'-61.0' and 79.0'-82.0' bgs.
No odor or staining observed.
No recovery from 6.0'-7.0' bgs.

Date Start: 8/22/2013
Date Finish: 8/22/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 5.3
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T. Darmon

Well/Boring ID: VAP-P2-LG111
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.4') SILT, trace clay, nonplastic, rapid dilatancy; trace fine sand; moist; yellowish brown (10YR 5/4).		
				NA			(0.4'-1.9') SAND, medium; little gravel, subrounded to subangular; poorly sorted; moist; yellowish brown (10YR 5/4).		
	1	0.0-6.0	6.0				(1.9'-4.0') CLAY, little silt, low plasticity, slow dilatancy; little fine sand; moist; soft; gray (10YR 5/1).		
				NA					
							(4.0'-6.0') CLAY, trace silt, high plasticity, no dilatancy; medium stiff; moist; gray (10YR 5/1).		
5 / -5				0.0			NOTE: Wet; odor at 5.3' bgs.	▼	
	2	6.0-7.0	1.0	0.0			(6.0'-7.0') CLAY, trace silt, high plasticity, no dilatancy; medium stiff; moist; gray (10YR 5/1).		
							(7.0'-9.0') CLAY, trace silt, high plasticity, no dilatancy; soft; moist; gray (10YR 5/1).		
				0.8					
							(9.0'-13.0') SAND, medium to coarse, subrounded; trace silt; poorly sorted; wet; light olive brown (2.5Y 5/4).		
10 / -10	3	7.0-17.0	10.0	3.2					
				1.7					
							(13.0'-17.0') SILT, little clay, low plasticity, slow dilatancy; trace fine sand; moist; soft; dark gray (2.5 4/1).		
				0.0					
15 / -15									
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 5.3' and from 9.0'-13.0' bgs.
Odor detected at 5.3' bgs.
No staining observed.

Date Start: 8/22/2013
Date Finish: 8/22/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 5.3
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T. Darmon

Well/Boring ID: VAP-P2-LG111
Client: RACER
Location: RACER Lansing Plant 2
Weather Conditions: Cloudy, 70's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.3			(17.0'-18.0') SAND, coarse, subangular to subround; well sorted; moist; light olive brown (2.5Y 4/2).		
							(18.0'-23.0') CLAY, little silt, medium plasticity, no dilatancy; trace fine sand; medium stiff; moist; gray (10YR 5/1).		
20 -20	4	17.0-27.0	10.0	0.0					
				0.0					
							(23.0'-27.0') CLAY and SILT, medium plasticity, no dilatancy; trace fine sand; stiff; moist; gray (10YR 5/1).		
25 -25				0.0					
				0.0					
				0.0			(27.0'-32.5') CLAY, trace silt, high plasticity, no dilatancy; medium stiff; moist; dark grayish brown (2.5Y 4/2).		
30 -30	5	27.0-37.0	10.0	0.6			NOTE: Trace medium pebbles from 31.0-32.5' bgs.		
				0.4					
							(32.5'-35.0') SAND, medium, subround; trace silt and clay; poorly sorted; most; grayish brown (10YR 5/2).		
				0.2					
35 -35							(35.0'-37.0') CLAY, trace silt, high plasticity, no dilatancy; medium stiff; moist; dark grayish brown (2.5Y 4/2).		
				0.5					

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Remarks: bgs = below ground surface
Groundwater encountered at 5.3' and from 9.0'-13.0' bgs.
Odor detected at 5.3' bgs.
No staining observed.

Date Start: 8/22/2013
Date Finish: 8/22/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 5.3
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T. Darmon

Well/Boring ID: VAP-P2-LG111
Client: RACER
Location: RACER Lansing Plant 2
Weather Conditions: Cloudy, 70's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				1.8			(37.0'-40.0') SILT, little clay, low plasticity, slow dilatancy; very stiff; moist; dark grayish brown (2.5Y 4/2).		
40 -40	6	37.0-47.0	10.0	2.6			(40.0'-41.5') SILT, little clay, low plasticity, slow dilatancy; very stiff; moist; dark grayish brown (2.5Y 4/2). NOTE: Trace fine sand, subround; poorly sorted; laminations; gray (10YR 5/1).		
				1.4			(41.5'-47.0') CLAY and SILT, low plasticity, no dilatancy; some medium to large pebbles; soft; moist; darj grayish brown (2.5Y 4/2). NOTE: Till.		
				3.5					
45 -45				3.7					
				0.0			(47.0'-51.0') SILT, trace to little clay, nonplastic, slow dilatancy; stiff; moist; dark gray (10YR 4/1). NOTE: Till.		
50 -50	7	47.0-57.0	10.0	0.0					
				0.0			(51.0'-55.0') SAND, medium to coarse; trace small to medium pebbles, subround; poorly sorted; dry; yellowish brown (10YR 5/4).		
				0.0					
55 -55				0.0			(55.0'-57.0') CLAY and SILT, low plasticity, slow dilatancy; medium stiff; moist; dark gray (10YR 4/1).		

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Remarks: bgs = below ground surface
Groundwater encountered at 5.3' and from 9.0'-13.0' bgs.
Odor detected at 5.3' bgs.
No staining observed.

Date Start: 8/22/2013
Date Finish: 8/22/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 5.3
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T. Darmon

Well/Boring ID: VAP-P2-LG111
Client: RACER
Location: RACER Lansing Plant 2
Weather Conditions: Cloudy, 70's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.6			(57.0'-65.0') SILT, trace clay, nonplastic, rapid dilatancy; some small to medium pebbles; very stiff; moist; gray (10YR 5/1). NOTE: Till.		
	8	57.0-67.0	10.0						
60 -60				4.1					
				4.3					
				7.9					
65 -65							(65.0'-67.0') SILT, little clay, low plasticity, slow dilatancy; very stiff; moist; dark grayish brown (2.5Y 4/2). NOTE: Sandstone fragments, small to medium sized; gray (10YR 5/1).		
				5.2					
				9.8			(67.0'-71.0') SILT, nonplastic; some medium pebbles; hard; dry; very dark gray brown (2.5Y 3/2). NOTE: Till.		
	9	67.0-74.0	7.0						
70 -70				9.4					
				18.6			(71.0'-76.5') SANDSTONE, weathered, moderate cementation, thin laminations.*/NOTE: unable to push full 10.0'.		
				6.3					
				2.7			NOTE: Wet from 74.0-76.5' bgs.		
75 -75	10	74.0-77.0	3.0						
				8.8					
							(76.5'-77.0') SANDSTONE, weathered; small to large cobble size; dry; gray (10YR 5/1).		

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Remarks: bgs = below ground surface
Groundwater encountered at 5.3' and from 9.0'-13.0' bgs.
Odor detected at 5.3' bgs.
No staining observed.

Date Start: 8/22/2013
Date Finish: 8/22/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 5.3
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 82.0' bgs
Surface Elevation:

Descriptions By: T. Darmon

Well/Boring ID: VAP-P2-LG111

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	11	77.0-82.0	5.0	1.2 0.0 0.2			(77.0'-82.0') SANDSTONE, weathered; small pebbles to large cobble; dry; gray (10YR 5/1). NOTE: Wet from 80.0-82.0' bgs.		
85 -85							End of boring at 82.0' bgs.		
90 -90									
95 -95									

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Remarks: bgs = below ground surface
Groundwater encountered at 5.3' and from 9.0'-13.0' bgs.
Odor detected at 5.3' bgs.
No staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-LN73**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 80 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-2.0	2.0	0.0			(0.0'-3.0') SAND, very fine; and PEBBLES, large; trace silt, subround to subangular; poorly sorted; moist; yellowish brown (10YR 5/4).		
	2	2.0-4.0	2.0	0.0			(3.0'-6.0') SILT, some clay, low plasticity, no dilatancy; moist; medium stiff; light yellowish brown (2.5Y 6/3).		
5 / -5	3	4.0-6.0	2.0	0.0					
	4	6.0-7.0	1.0	0.0			(6.0'-8.0') CLAY, little silt, medium plasticity, no dilatancy; moist; medium stiff; very dark gray (2.5Y 3/0).		
				0.0			(8.0'-9.0') SILT, trace clay, non-plastic, slow dilatancy; trace very fine sand; moist; soft; light olive brown (2.5Y 5/2).		
10 / -10	5	7.0-17.0	10.0	0.0			(9.0'-13.0') SAND, very fine to coarse, little small pebbles; trace silt, subround; poorly sorted; moist; gray (2.5Y 5/0).		
				0.0					
				0.0			(13.0'-13.8') SAND, medium to coarse, subround; well sorted; wet; gray (2.5Y 5/0).		
15 / -15				0.0			(13.8'-17.0') CLAY, some silt, low to medium plasticity, no dilatancy; moist medium stiff; dark gray (2/5Y 4/1).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 13.0'-13.8' and 67.0'-72.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-LN73

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 80 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(17.0'-19.0') SILT, little clay, non-plastic, slow dilatancy; some very fine to fine sand; moist; soft; dark gray (2.5Y 4/1).		
20 -20	6	17.0-27.0	10.0	0.3			(19.0'-28.0') CLAY and SILT, low plasticity, no dilatancy; trace very fine to coarse sand; little small to medium pebbles; hard.		
				1.1					
				0.0					
25 -25				0.0					
				2.2			(28.0'-35.0') CLAY, some silt, low to medium plasticity, no dilatancy; trace very fine to coarse sand, granules to large pebbles, round to subround; poorly sorted; dark grayish brown (2.5Y 4/2).		
30 -30	7	27.0-37.0	10.0	3.3					
				1.8					
				4.1					
35 -35							(35.0'-43.0') SAND, very fine to fine, subround; well sorted; dry; light brownish gray (10YR 4/2).		
				2.1					

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Remarks: bgs = below ground surface
Groundwater encountered from 13.0'-13.8' and 67.0'-72.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-LN73

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 80 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.9					
40 -40	8	37.0-47.0	10.0	1.3					
				15.8					
							(43.0'-45.0') SAND, fine to coarse; little small to large pebbles, subround; poorly sorted; dry; light brownish gray (10YR 6/2).		
				0.4					
45 -45							(45.0'-55.0') SAND, very fine to fine; subround; trace silt; well sorted; dry; light brownish gray (10YR 6/2).		
				8.9					
				0.0					
50 -50	9	47.0-57.0	10.0	0.1					
				0.3					
				0.0					
55 -55							(55.0'-67.0') SILT, trace clay, non-plastic, slow dilatancy; trace very fine to medium sand; stiff; moist; very dark grayish brown (10YR 3/2).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 13.0'-13.8' and 67.0'-72.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/29/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-LN73**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 80 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	10	57.0-67.0	10.0						
65 -65									
	11	67.0-72.0	5.0				(67.0'-72.0') SANDSTONE, weathered, very fine to fine grained, subround; well sorted; wet; gray (2.5Y 5/0).		
70 -70									
							End of boring at 72.0' bgs.		
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered from 13.0'-13.8' and 67.0'-72.0' bgs.
No odor or staining observed.

Date Start: 8/23/2013
Date Finish: 8/23/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation:

Borehole Depth (ft. bgs.): 10.0' bgs.
Surface Elevation:

Descriptions By: T. Darman

Well/Boring ID: VAP-P2-LO90

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 70's

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-2.0	2.0	0.0 0.0			(0.0'-0.2') GRASS. (0.2'-4.0') SAND, fine to coarse; and GRAVEL, medium pebbles, subrounded; trace small cobbles; trace silt; poorly sorted; moist; yellowish brown (10YR 5/4). NOTE: Wood fragments at 1.0' bgs. NOTE: Concrete, metal, glass, fill material from 2.0-4.0' bgs.		
	2	2.0-4.0	2.0	0.0 0.0					
5 / -5	3	4.0-6.0	2.0	0.0 0.0			(4.0'-6.0') SAND, fine to coarse; and GRAVEL, medium pebbles, subrounded; trace cobbles; trace clay, low plasticity; stiff; poorly sorted; moist; gray (10YR 5/1).		
	4	6.0-10.0	0.0	0.0 0.0 0.0 0.0			(6.0'-10.0') No Recovery. NOTE: Void space 7.5-10.0' bgs. NOTE: Down borehole view at 7.0'-7.5' bgs concrete.		
10 / -10							End of boring at 10.0' bgs.		
15 / -15									

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Remarks: bgs = below ground surface
Groundwater not encountered.
No odor or staining observed.
No recovery 7.5'-10.0' bgs.

Date Start: 8/26/2013
Date Finish: 8/26/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-LO91**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-2.0	2.0	0.0			(0.0'-5.3') SAND, very fine to fine; and PEBBLES, large; trace silt; subround; poorly sorted; moist; yellowish brown (10YR 5/4).		
	2	2.0-4.0	2.0	0.0					
5 / -5	3	4.0-6.0	2.0	0.0			(5.3'-6.0') CLAY, trace to little silt, medium plasticity, no dilatancy; moist; soft; light yellowish brown (2.5Y 6/3).		
	4	6.0-7.0	1.0	0.0			(6.0'-6.7') SAND, very fine to medium, subround; well sorted; moist; very pale brown (10YR 7/4).		
							(6.7'-7.0') CLAY, little silt, medium plasticity, no dilatancy; moist; soft; very dark gray (2.5Y 3/0).		
				0.0			(7.0'-8.0') SAND, very fine, subround; little silt; poorly sorted; wet; gray (2.5Y 6/0).		
							(8.0'-16.0') CLAY, some silt, low to medium plasticity, no dilatancy; moist; soft; dark gray (2.5Y 4/1).		
10 / -10	5	7.0-17.0	10.0	0.3					
				0.6					
				1.0					
15 / -15									
				0.5			(16.0'-17.0') SILT, some clay, low plasticity, slow dilatancy; moist; soft; dark gray (2.5Y 4/1).		
							(17.0'-19.0') SILT, little clay, non-plastic, slow dilatancy; some very fine to fine sand; moist; medium stiff; dark gray (2.5Y 4/1).		

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Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-8.0', 22.0'-33.0' and 72.0'-77.0' bgs.
No odor or staining observed.

Date Start: 8/26/2013
Date Finish: 8/26/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-LO91

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.8					
20 -20	6	17.0-27.0	10.0	1.0			(19.0'-22.0') CLAY, little silt, medium plasticity, no dilatancy; moist; medium stiff; grayish brown (2.5Y 5/2).		
				0.6			(22.0'-25.0') SILT and CLAY, non-plastic; some very fine to coarse sand, granules to medium pebbles; wet; medium stiff; gray (2.5Y 5/0).		
				0.8					
25 -25				0.8			(25.0'-28.0') SILT and CLAY, low plasticity; some very fine to coarse sand; medium stiff; wet; pale brown (10YR 6/3).		
				0.7			(28.0'-33.0') SAND, very fine to fine, subangular to subround; well sorted; wet; light yellowish brown (10YR 6/4).		
30 -30	7	27.0-37.0	10.0	0.3					
				0.0					
				0.0			(33.0'-37.0') SILT, some clay, low plasticity, slow dilatancy; little very fine sand to granules; some small to large pebbles, subround; moist; stiff; dark grayish brown (2.5Y 4/2).		
35 -35				0.0					
							(37.0'-49.0') CLAY, some silt, low plasticity; some very fine sand to granules; some small to larges pebbles, subround; poorly sorted; medium stiff to stiff; moist; dark grayish brown (2.5Y 4/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-8.0', 22.0'-33.0' and 72.0'-77.0' bgs.
No odor or staining observed.

Date Start: 8/26/2013
Date Finish: 8/26/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-LO91**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.4					
40 -40	8	37.0-47.0	10.0	1.3					
				1.0					
				1.8					
45 -45				2.1					
				4.8					
50 -50	9	47.0-57.0	10.0	12.1			(49.0'-58.0') SAND, very fine to fine, subround; well sorted; dry; light brownish gray (10YR 6/2).		
				10.1					
				9.6					
55 -55				12.8					

Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-8.0', 22.0'-33.0' and 72.0'-77.0' bgs.
No odor or staining observed.

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Date Start: 8/26/2013
Date Finish: 8/26/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-LO91**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Partly Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	10	57.0-67.0	10.0	10.2 8.1 1.1 2.1			(58.0'-65.0') SAND, very fine to coarse; trace small to medium pebbles, subround; poorly sorted; dry; dark grayish brown (10YR 4/2).		
65 -65				0.0			(65.0'-72.0') SILT, trace clay, non-plastic, slow dilatancy; trace very fine to coarse sand; small pebbles, subround to subangular; moist; very dark grayish brown (10YR 3/2).		
70 -70	11	67.0-72.0	5.0	0.0 0.8 8.0					
75 -75	12	72.0-77.0	5.0	8.0 3.2 8.6			(72.0'-77.0') SANDSTONE, weathered, fine grained; well sorted; wet; gray (2.5Y 5/0).		
							End of boring at 77.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 7.0'-8.0', 22.0'-33.0' and 72.0'-77.0' bgs.
No odor or staining observed.

Date Start: 8/26/2013
Date Finish: 8/27/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-LY111

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-2.0	2.0	0.0			(0.0'-4.5') SAND, very fine; and PEBBLES, large, subround; trace silt; poorly sorted; moist; yellowish brown (10YR 5/4).		
	2	2.0-4.0	2.0	0.0					
5 / -5	3	4.0-6.0	2.0	0.0			(4.5'-5.0') CLAY, trace silt, low plasticity, no dilatancy; moist; medium stiff; gray (10YR 5/1). (5.0'-6.0') CLAY, some silt, low plasticity; some very fine to medium sand, subround; poorly sorted; medium stiff; wet; gray (10YR 5/1).		
	4	6.0-7.0	1.0	2.1			(6.0'-12.0') CLAY, little silt, medium plasticity, no dilatancy; moist stiff; yellowish brown (10YR 5/4).		
				4.6					
10 / -10	5	7.0-17.0	10.0	4.1					
				4.0			(12.0'-17.0') SILT, some clay, non-plastic, slow dilatancy; moist; very stiff; gray (10YR 5/1).		
				4.3					
15 / -15				7.0					
							(17.0'-17.5') SAND, very fine to coarse, subround to subangular; some silt, little clay; poorly sorted; wet; light olive brown (2.5Y 4/2). (17.5'-19.0') CLAY, some silt, high plasticity, no dilatancy; moist; medium stiff; gray		

Remarks: bgs = below ground surface
Groundwater encountered from 5.0'-6.0', 17.0'-17.25', 20.0'-23.0' and at 72.0' bgs.
No odor or staining observed.

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Date Start: 8/26/2013
Date Finish: 8/27/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-LY111
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				1.4			(10YR 5/1).		
							(19.0'-20.0') CLAY, little silt, high plasticity, no dilatancy; trace very fine to coarse sand; trace small pebbles, subround; moist; soft gray (10YR 5/1).		
20 -20	6	17.0-27.0	10.0	1.6			(20.0'-23.0') SAND, very fine to coarse, subround; some silt; poorly sorted; wet; gray (10YR 5/1).		
				0.7					
							(23.0'-27.0') CLAY, little silt, low to medium plasticity, no dilatancy; trace very fine to very coarse sand; trace small to large pebbles; medium stiff; gray (10YR 5/1).		
				1.0					
25 -25				1.8					
							(27.0'-36.0') SILT, some clay, low plasticity, slow dilatancy; little very fine to very coarse sand; trace small to large pebbles; moist; stiff; gray (10YR 5/1).		
				0.6					
30 -30				0.8					
	7	27.0-37.0	10.0						
				0.0					
				1.0					
35 -35									
				1.3			(36.0'-37.0') SAND, very fine to medium, subround to subangular; well sorted; moist; grayish brown (10YR 5/2).		
							(37.0'-41.0') SAND, very fine to medium, subround; well sorted; moist; grayish brown (10YR 5/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 5.0'-6.0', 17.0'-17.25', 20.0'-23.0' and at 72.0' bgs.
No odor or staining observed.

Date Start: 8/26/2013
Date Finish: 8/27/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-LY111
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				10.4					
40 -40	8	37.0-47.0	10.0	4.2			(41.0'-41.6') SILT, clay, non-plastic, slow dilatancy; some very fine to fine sand; dry; stiff; grayish brown (10YR 5/2).		
				58.4			(41.6'-49.0') SAND, very fine to medium, subround; well sorted; dry; grayish brown (10YR 5/2).		
				56.9					
45 -45				45.2					
				8.7					
50 -50	9	47.0-57.0	10.0	2.1			(49.0'-52.0') CLAY, little silt, high plasticity, no dilatancy; little very fine to very coarse sand; trace small to large pebbles; soft; dark gray (10YR 4/1).		
				2.8			(52.0'-67.0') SILT, trace clay, non-plastic, rapid dilatancy; little very fine to coarse sand; trace small to large pebbles; hard; gray (10YR 5/1).		
				4.1			NOTE: Interbedded sand lenses, very fine to medium, subround; well sorted; moist; grayish brown (10YR 5/2) at 54.0' bgs.		
55 -55				4.3					

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Remarks: bgs = below ground surface
Groundwater encountered from 5.0'-6.0', 17.0'-17.25', 20.0'-23.0' and at 72.0' bgs.
No odor or staining observed.

Date Start: 8/26/2013
Date Finish: 8/27/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-LY111
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, Light Rain

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				3.0					
60 -60	10	57.0-67.0	10.0	7.8					
				10.1					
				14.1					
65 -65				273					
	11	67.0-72.0	5.0	1327			(67.0'-77.0') SANDSTONE, very fine to fine grained, subround; well sorted; gray (2.5Y 5/0).		
70 -70				541					
				108.1					
				15.2					
	12	72.0-77.0	5.0	9.6					
75 -75				9.7					
							End of boring at 77.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 5.0'-6.0', 17.0'-17.25', 20.0'-23.0' and at 72.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/30/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 5.7
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-MH82

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 80 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-2.0	2.0	0.0			(0.0'-6.2') SAND, very fine; and PEBBLES, large; trace silt, subround; poorly sorted; moist; yellowish brown (10YR 5/4). NOTE: Trace wood.		
	2	2.0-4.0	2.0	0.0					
5 / -5	3	4.0-6.0	2.0	0.0			NOTE: Wet at 5.7' bgs.	▼	
	4	6.0-7.0	1.0	0.0			(6.2'-10.0') CLAY, little silt, medium plasticity, no dilatancy; moist; soft; very dark gray (2.5Y 3/0).		
10 / -10	5	7.0-17.0	10.0	0.0			(10.0'-19.0') CLAY, some silt, low plasticity; little very fine to fine sand; medium stiff; grayish brown (2.5Y 5/2).		
				0.0					
				0.0					
15 / -15				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 5.7', from 19.0'-20.0' and 26.0'-27.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/30/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 5.7
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-MH82**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 80 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.8					
20 -20	6	17.0-27.0	10.0	0.4			(19.0'-20.0') SAND, very fine to fine, subround; trace silt; poorly sorted; wet; grayish brown (2.5Y 5/2).		
				0.5			(20.0'-26.0') CLAY, little silt, high plasticity, no dilatancy; moist; medium stiff; pale brown (10YR 6/3).		
25 -25				0.0					
				0.5			(26.0'-27.0') SAND, very fine to fine, subround; well sorted; wet; pale brown (10YR 6/3).		
				1.1			(27.0'-37.0') SILT, some clay, low plasticity, slow dilatancy; little very fine sand to granules; trace small to medium pebbles; moist; stiff; dark grayish brown (2.5Y 4/2).		
30 -30	7	27.0-37.0	10.0	0.8					
				0.4					
				0.0					
35 -35				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 5.7', from 19.0'-20.0' and 26.0'-27.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/30/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 5.7
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-MH82**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 80 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	8	37.0-47.0	10.0	2.3 0.8 6.5 1.1 3.3			(37.0'-45.0') CLAY, some silt, low plasticity; some very fine to coarse sand, granules; little small to pebbles, subround; medium stiff; moist; dark grayish brown (2.5Y 4/2). (45.0'-58.0') SAND, very fine to fine, subround; well sorted; dry; light brownish gray(10YR 6/2).		
50 -50	9	47.0-57.0	10.0						
55 -55									

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Remarks: bgs = below ground surface
Groundwater encountered at 5.7', from 19.0'-20.0' and 26.0'-27.0' bgs.
No odor or staining observed.

Date Start: 8/29/2013
Date Finish: 8/30/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 5.7
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-MH82**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 80 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				4.1			(58.0'-67.0') SILT, trace clay, non-plastic, slow to rapid dilatancy; trace very fine to coarse sand; trace small to large pebbles; trace very large pebbles; moist; very dark grayish brown (10YR 3/2).		
60 -60	10	57.0-67.0	10.0	5.2					
				4.7					
				3.3					
65 -65				10.9					
				9.1			(67.0'-72.0') SAND, fine grained; well sorted; sandstone, weathered; gray (2.5Y 5/0).		
	11	67.0-72.0	5.0						
70 -70				4.6					
				8.2					
							End of boring at 72.0' bgs.		
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered at 5.7', from 19.0'-20.0' and 26.0'-27.0' bgs.
No odor or staining observed.

Date Start: 8/28/2013
Date Finish: 8/28/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: **VAP-P2-MI101**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
							(0.0'-0.6') CONCRETE.		
	1	0.0-2.0	2.0	0.0			(0.6'-5.0') SAND, very fine to medium, subround; well sorted; moist; yellowish brown (10YR 5/4).		
	2	2.0-4.0	2.0	0.0					
5 / -5	3	4.0-6.0	2.0	0.0			(5.0'-7.0') CLAY, some silt, low plasticity, no dilatancy; medium stiff; gray (10YR 5/1).		
	4	6.0-7.0	1.0	0.0			(7.0'-10.0') CLAY, some silt, medium plasticity, slow dilatancy; trace very fine to medium sand, subround; stiff; gray (10YR 5/1).		
10 / -10	5	7.0-17.0	10.0	0.4			(10.0'-14.0') SAND, very fine to medium, subround; some silt; poorly sorted; wet; yellowish brown (10YR 5/4).		
				0.8					
				2.4			(14.0'-15.0') SAND, medium to coarse, subangular to subround; well sorted; wet.		
15 / -15							(15.0'-27.0') CLAY, some silt, medium plasticity, no dilatancy; little very fine to fine sand; little small to large pebbles; moist; very stiff; gray (10YR 5/1).		
				12.1					
							(17.0'-27.0') CLAY, little silt, medium plasticity, no dilatancy; trace very fine to coarse sand; trace small to large pebbles; medium stiff; gray (10YR 5/1)		

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-15.0', 27.0'-33.5' and at 72.0' bgs.
No odor or staining observed.

Date Start: 8/28/2013
Date Finish: 8/28/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-MI101
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				2.9					
20 -20	6	17.0-27.0	10.0	3.1					
				2.9					
				5.7					
25 -25							NOTE: High plasticity from 25.0'-27.0' bgs.		
				4.2					
				1.5			(27.0'-33.5') SAND, fine to coarse, subangular to subround; well sorted; wet; light olive brown (2.5Y 4/2).		
30 -30				4.8					
	7	27.0-37.0	10.0						
				20.1					
							(33.5'-34.0') SILT, non-plastic, rapid dilatancy; trace very fine sand; moist; stiff; light olive brown (2.5Y 4/2).		
				21.2			(34.0'-39.0') SAND, very fine to fine, subround; well sorted; dry; grayish brown (10YR 5/2).		
35 -35									
				24.2					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-15.0', 27.0'-33.5' and at 72.0' bgs.
No odor or staining observed.

Date Start: 8/28/2013
Date Finish: 8/28/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-MI101

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				2.4					
40 -40	8	37.0-47.0	10.0	8.1			(39.0'-43.0') SILT, trace clay, low plasticity, slow dilatancy; some very fine to fine sand; dry; stiff; grayish brown (10YR 5/2).		
				24.0					
							(43.0'-54.0') SAND, very fine to medium, subround; well sorted; moist; grayish brown (10YR 5/2).		
				18.2					
45 -45				19.1					
				5.3					
50 -50	9	47.0-57.0	10.0	6.2					
				4.0					
				7.6			(54.0'-57.0') CLAY, little silt, medium plasticity, no dilatancy; little very fine to coarse sand; trace small to large pebbles; medium stiff; gray (10YR 5/1).		
55 -55									
							(57.0'-66.0') SILT, trace silt, non-plastic to low plasticity, rapid dilatancy; little very fine to coarse sand, trace small to large pebbles; hard; gray (10YR 5/1).		

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-15.0', 27.0'-33.5' and at 72.0' bgs.
No odor or staining observed.

Date Start: 8/28/2013
Date Finish: 8/28/2013
Drilling Company: Cascade
Driller's Name: Dan, Steve, Andy
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: T.Darmon

Well/Boring ID: VAP-P2-MI101

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				5.8					
60 -60	10	57.0-67.0	10.0	7.1					
				6.8					
				7.3					
65 -65									
				10.4			(66.0'-77.0') SANDSTONE, weathered, very fine to fine grained, subround; well sorted; gray (2.5Y 5/0).		
				100.1					
70 -70	11	67.0-77.0	10.0	98.3					
				401.6			NOTE: At 72.0', wet.		
				800.2					
75 -75									
				100.1					
							End of boring at 77.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-15.0', 27.0'-33.5' and at 72.0' bgs.
No odor or staining observed.

Date Start: 10/9/2013
Date Finish: 10/10/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-MI62**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.5') GRASS and TOPSOIL.		
	1	0.0-6.0	6.0	0.0 0.0 0.1 0.2 0.1 0.0			(0.5'-9.0') Fill material. SAND, fine to coarse, subround; trace granules to large pebbles, subround; and CLAY, medium plasticity, no dilatancy; moist; medium stiff; brown (10YR 4/3). NOTE: Orange brick fragments, metal screws and wood debris.		
5 / -5	2	6.0-10.0	4.0	0.0 0.1 0.0 0.0			(9.0'-12.0') CLAY, some silt, medium plasticity, no dilatancy; some fine to medium sand, subround; little granules to very large pebbles, subround; moist; stiff; dark grayish brown (10YR 4/2). NOTE: Glacial till.		
10 / -10	3	10.0-17.0	7.0	0.0 0.0 0.0 0.0 0.1			(12.0'-20.0') CLAY, trace silt, high plasticity, no dilatancy; moist; very soft; grayish brown (10YR 5/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 20.0'-24.0', 29.0'-36.5' bgs.
No odor or staining observed.

Date Start: 10/9/2013 **Date Finish:** 10/10/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 77.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-MI62** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
15 -15				0.0 0.0 0.0					
				0.0 0.0 0.0					
20 -20	4	17.0-27.0	10.0	0.0 0.0 0.1 0.0			(20.0'-24.0') SAND, medium to coarse; little granules to small pebbles, subround; trace medium to large pebbles, subround; little silt; poorly sorted; wet; light grayish brown (10YR 6/2).		
25 -25				0.0 0.0 0.0 0.0			(24.0'-29.0') CLAY, some silt, medium to high plasticity, no dilatancy; little fine sand; trace granules to very large pebbles, subround; moist; stiff; pale brown (10YR 6/3).		
				0.0 0.0 0.0			(29.0'-36.5') SAND, fine, subround; little silt; well sorted; wet; pale brown (10YR 6/3).		

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Remarks: bgs = below ground surface
Groundwater encountered from 20.0'-24.0', 29.0'-36.5' bgs.
No odor or staining observed.

Date Start: 10/9/2013
Date Finish: 10/10/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-MI62

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	5	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			NOTE: From 35.5'-36.5' bgs, medium coarse sand; some small to very large pebbles, subangular; little silt; wet; poorly sorted; pale brown (10YR 6/3).		
35 -35							(36.5'-42.0') CLAY, some silt, medium plasticity, no dilatancy; little fine to medium sand; trace granules to very large pebbles, subround; moist; stiff; grayish brown (10YR 5/2).		
40 -40	6	37.0-47.0	10.0	0.0 0.0 0.1 0.0 0.0 0.0 0.0			(42.0'-56.0') SAND, very fine to fine, subround; little silt; well sorted; dry; very pale brown (10YR 7/3).		
45 -45				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 20.0'-24.0', 29.0'-36.5' bgs.
No odor or staining observed.

Date Start: 10/9/2013 **Date Finish:** 10/10/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 77.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-MI62** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.1					
				0.0					
50 -50	7	47.0-57.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.1					
				0.0			(56.0'-67.5') CLAY and SILT, medium plasticity, no dilatancy; little fine sand; trace granules to large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial till.		
				0.0					
	8	57.0-67.0	10.0	0.0					
				0.0					
60 -60				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 20.0'-24.0', 29.0'-36.5' bgs.
No odor or staining observed.

Date Start: 10/9/2013
Date Finish: 10/10/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-MI62**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
65 -65				0.0 0.0 0.0 0.0 0.0					
70 -70	9	67.0-77.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(67.5'-77.0') SANDSTONE, weathered, fine grained; light gray (10YR 7/2). NOTE: Grand River Formation; no shale present.		
75 -75							End of boring at 77.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered from 20.0'-24.0', 29.0'-36.5' bgs.
No odor or staining observed.

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Date Start: 10/3/2013 **Date Finish:** 10/4/2013 **Drilling Company:** Cascade **Driller's Name:** Steve **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 75.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OS100** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	NA 0.0 0.0 0.0 0.0			(0.0'-6.0') Fill material. Concrete, asphalt and sand. Hand cleared.		
5 / -5							(6.0'-6.5') SAND, fine; trace granules to large pebbles, subround; little silt; well sorted; wet; yellowish brown (10YR 5/4). NOTE: Fill material.		
	2	6.0-10.0	4.0	0.0 0.0 0.1 0.0			(6.5'-7.0') ASPHALT. Fill material. (7.0'-15.5') CLAY, little silt, high plasticity, no dilatancy; trace to little very fine to fine sand; trace to little granules to large pebbles, subround; stiff; moist; brown (10YR 5/3). NOTE: Till. Mottles color brown (!0YR 5/3) with brownish yellow (10YR 6/6.		
10 / -10	3	10.0-20.0	9.0	0.0 0.0 0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 6.0'-6.5', 15.5'-19.0' and 19.5'-24.5' bgs.
No odor or staining observed.

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Date Start: 10/3/2013
Date Finish: 10/4/2013
Drilling Company: Cascade
Driller's Name: Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-OS100**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.1					
15 -15				0.0					
				0.2			(15.5'-18.0') SAND, fine; trace granules, subround; little silt; well sorted; wet; yellowish brown (10YR 5/6).		
				0.1					
				0.0					
				0.0			(18.0'-19.0') SAND, fine to medium; trace granules to medium pebbles, subround; little silt; poorly sorted; wet; dark yellowish brown (10YR 4/2).		
							(19.0'-19.5') CLAY, little silt, high plasticity, no to slow dilatancy; little very fine sand; trace small to large pebbles, subround; moist; soft; gray (10YR 5/1).		
				0.0			(19.5'-24.5') SAND, medium, subround; little silt; well sorted; wet; light brownish gray (10YR 6/2). NOTE: Very fine to fine from 23.5'-24.5' bgs.		
20 -20				0.0					
	4	20.0-30.0	8.5	0.0					
				0.0					
				0.0					
				0.0					
25 -25				0.0			(24.5'-26.0') CLAY, little silt; medium to high plasticity; little fine to medium sand; trace granules to medium pebbles, subround; dry to moist; medium stiff; grayish brown (10YR 5/2).		
				0.0					
				0.0			(26.0'-27.0') SILT, some to little clay, non-plastic, high dilatancy; little very fine sand, subround; wet; very soft; gray (10YR 5/1).		
				0.0			(27.0'-28.0') CLAY, some silt, medium plasticity, no dilatancy; little fine sand; trace granules to medium pebbles, subround; dry to moist; medium stiff to stiff; gray (10YR 5/1).		
				0.1			(28.0'-41.0') SAND, fine; trace granules, subround; well sorted; dry; grayish brown (10YR 5/2).		

Remarks: bgs = below ground surface
Groundwater encountered from 6.0'-6.5', 15.5'-19.0' and 19.5'-24.5' bgs.
No odor or staining observed.

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Date Start: 10/3/2013
Date Finish: 10/4/2013
Drilling Company: Cascade
Driller's Name: Steve
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 75.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-OS100**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
30 -30				0.0					
	5	30.0-35.5	5.0	0.0					
				0.0					
				0.0					
35 -35				0.0					
	6	35.5-40.0	5.0	0.0					
				0.0					
				0.0					
40 -40				0.0					
	7	40.0-49.0	8.5	0.0			(41.0'-45.5') SAND, very fine to fine, subround; and SILT, non-plastic, slow dilatancy; moist; well sorted; soft; light brownish gray (10YR 6/2). NOTE: Increase in silt and trace granules to very large pebbles from 43.0'-45.5' bgs.		
				0.1					
				0.1					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 6.0'-6.5', 15.5'-19.0' and 19.5'-24.5' bgs.
No odor or staining observed.

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Date Start: 10/3/2013 **Date Finish:** 10/4/2013 **Drilling Company:** Cascade **Driller's Name:** Steve **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 75.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OS100** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			(45.5'-48.0') SAND, very fine to fine, subround; little to some silt; well sorted; dry to moist; light brownish gray (10YR 6/2).		
				0.1					
				0.0			(48.0'-50.0') CLAY and SILT, low to non-plastic, no dilatancy; little fine to medium sand; trace granules to large pebbles, subangular; dry to moist; very stiff; gray (10YR 5/1). NOTE: Trace sandstone, very fine; with small black silt/shale lenses.		
				0.0					
50 -50				0.0			(50.0'-55.0') SAND, very fine to fine; trace to little granules to large pebbles, subround; little silt; poorly sorted; dry to moist; light brownish gray (10YR 6/2). NOTE: Trace very fine sandstone fragments.		
	8	49.9-55.0	6.0	0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0			(55.0'-61.0') CLAY and SILT, low to non-plastic, no dilatancy; little fine to medium sand, trace granules to large pebbles, subangular; dry to moist; very stiff; gray (10YR 5/1). NOTE: Trace very fine sandstone fragments.		
	9	55.0-60.0	5.0	0.0					
				0.0					
				0.0					
				0.0					
60 -60				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 6.0'-6.5', 15.5'-19.0' and 19.5'-24.5' bgs.
No odor or staining observed.

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Date Start: 10/3/2013 **Date Finish:** 10/4/2013 **Drilling Company:** Cascade **Driller's Name:** Steve **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 75.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OS100** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	10	60.0-63.0	3.0	0.1 0.0			(61.0'-75.0') SANDSTONE, very fine to fine; light gray (10YR 7/1). NOTE: Large rock cores of sandstone with some pulverized sandstone; some fine dark gray to black laminations of shale. Saginaw Formation.		
	11	63.0-65.0	2.0	0.0 0.0					
65 -65	12	65.0-70.0	5.0	0.0 0.0 0.0 0.1 0.0					
70 -70	13	70.0-75.0	5.0	0.0 0.0 0.0 0.0 0.1					
75 -75							End of boring at 75.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 6.0'-6.5', 15.5'-19.0' and 19.5'-24.5' bgs.
No odor or staining observed.

Date Start: 10/7/2013
Date Finish: 10/7/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: HA to 6.0'/Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-OS120**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-6.0	6.0	NA NA NA			(0.0'-3.0') Fill material. Concrete and sand, hand cleared with air knife by Blood Hound.		
5 / -5				0.1 0.0 0.1			(3.0'-8.0') SAND, very fine to medium; trace coarse sand; trace granules to medium pebbles, subangular; little silt; poorly sorted; moist; light yellowish brown (10YR 6/4) from 3.0'-6.0' and very dark brown (10YR 2/2) from 6.0'-8.0'). NOTE: Fill material (concrete slab) from 2.5'-3.0' bgs.		
	2	6.0-10.0	4.0	0.0 0.0 0.0 0.0			(8.0'-17.0') CLAY, some silt, low plasticity, no dilatancy; trace fine sand, subround; moist; medium stiff; very dark brown (10YR 2/2) from 8.0'-9.0'. NOTE: Very organic rich, some organic matter and roots; light and sponge like.		
10 / -10	3	10.0-17.0	2.0	0.0 0.0 NA NA			NOTE: Poor recovery from 10.0'-17.0' bgs, sample was very soft and saturated.		

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-17.0' and 33.0'-39.0' bgs.
No odor or staining observed.
Poor recovery from 10.0'-17.0' bgs, sample was very soft and saturated.

Date Start: 10/7/2013
Date Finish: 10/7/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: HA to 6.0'/Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-OS120**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
15 -15				NA					
				NA					
				NA					
				0.0			(17.0'-33.0') CLAY, little to some silt, high plasticity, no dilatancy; little fine sand; trace to little granules to large pebbles, subround; moist; stiff; gray (10YR 5/1).		
				0.0					
				0.0					
20 -20				0.0					
	4	17.0-27.0	9.0	0.0					
				0.0					
				0.0					
				0.0			NOTE: Increase in fine sand and silt content at 24.0' bgs; very fine sand lenses from 24.0'-27.0' bgs; Glacial till.		
25 -25				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-17.0' and 33.0'-39.0' bgs.
No odor or staining observed.
Poor recovery from 10.0'-17.0' bgs, sample was very soft and saturated.

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Date Start: 10/7/2013
Date Finish: 10/7/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: HA to 6.0'/Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-OS120**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	5	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			(33.0'-39.0') SAND, fine to medium; trace granules, subround; trace to little silt; well sorted; moist to wet; pale brown (10YR 7/3).		
35 -35									
	6	37.0-42.0	5.0	0.0 0.0 0.0 0.0 0.0 0.0			(39.0'-48.0') CLAY, some silt, low plasticity, no dilatancy; little fine sand; trace granules to large pebbles, subround; moist; stiff; gray (10YR 5/1).		
40 -40									
	7	42.0-47.0	5.0	0.0 0.0 0.0 0.0 0.0					
45 -45									

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-17.0' and 33.0'-39.0' bgs.
No odor or staining observed.
Poor recovery from 10.0'-17.0' bgs, sample was very soft and saturated.

Date Start: 10/7/2013 **Date Finish:** 10/7/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** HA to 6.0'/Sonic/Air Knife **Sampling Method:** Sonic continous **Rig Type:** Sonic/Air Knife **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 77.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OS120** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.1					
				0.0					
				0.1			(48.0'-49.0') SAND, very fine to fine, subround; little silt; well sorted; moist; very dark gray (10YR 3/1).		
				0.0			(49.0'-51.0') CLAY and SILT, low plasticity, no dilatancy; little to some fine sand; little granules to medium pebbles, subangular; moist; stiff; gray (10YR 5/1). NOTE: Little to some, small to very large fine sandstone fragments with black shale laminations.		
50 -50				0.0					
	8	47.0-57.0	9.0	0.0			(51.0'-53.0') SAND, fine to fine; trace granules to large pebbles, subround; little silt; poorly sorted; dry to moist; light brownish gray (10YR 5/2). NOTE: Trace to little, small to medium fine sandstone fragments.		
				0.0					
				0.1			(53.0'-64.0') SILT and SAND, very fine to fine; trace to little fine sandstone fragments; small to large pebble size, subangular; trace clay, non-plastic; dry to moist; stiff; dark gray (10YR 4/1). NOTE: Weathered sandstone, some pulverized sandstone and shale.		
				0.0					
55 -55				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
60 -60	9	57.0-67.0	9.0	0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-17.0' and 33.0'-39.0' bgs.
No odor or staining observed.
Poor recovery from 10.0'-17.0' bgs, sample was very soft and saturated.

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Date Start: 10/7/2013
Date Finish: 10/7/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: HA to 6.0'/Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-OS120**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0			(64.0'-73.0') SHALE, some small to large fragments of angular sandstone; dry; hard; dark gray (10YR 4/1).		
65 -65				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.1					
70 -70	10	67.0-73.0	6.0	0.0					
				0.0					
				0.0					
				0.0			(73.0'-75.0') SANDSTONE, fine grained, light gray (10YR		
				0.0					
75 -75	11	73.0-77.0	4.0	0.0			(75.0'-77.0') SHALE with interbedded sandstone. NOTE: Saginaw Formation.		
				0.0					
				0.0					
							End of boring at 77.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-17.0' and 33.0'-39.0' bgs.
No odor or staining observed.
Poor recovery from 10.0'-17.0' bgs, sample was very soft and saturated.

Date Start: 10/8/2013 **Date Finish:** 10/8/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** HA to 6.0'/Sonic/Air Knife **Sampling Method:** Sonic continous **Rig Type:** Sonic/Air Knife **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 77.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OS78** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-5.0	5.0	0.0 0.0 0.0 0.0 0.0			(0.0'-5.0') Fill material. Concrete and fine to medium sand, little to small to large pebbles, subangular.		
5 / -5	2	5.0-7.0	2.0	0.0 0.0			(5.0'-6.0') CONCRETE (6.0'-16.0') CLAY, some silt, medium to high plasticity, no dilatancy; trace to little very fine to fine sand; trace to little granules to very large pebbles, subround; stiff; moist; gray (10YR 5/1). NOTE: Glacial till.		
10 / -10	3	7.0-17.0	10.0	0.1 0.0 0.1 0.0 0.0 0.0 0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 59.0'-60.5' bgs.
No odor or staining observed.

Date Start: 10/8/2013
Date Finish: 10/8/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: HA to 6.0'/Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-OS78
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
15 -15				0.0					
				0.0					
				0.0			(16.0'-17.0') SAND, fine to coarse; trace granules to small pebbles, subround; little silt; poorly sorted; moist; light brownish gray (10YR 6/2).		
				0.0			(17.0'-29.0') CLAY, little silt; high plasticity, no dilatancy; trace very fine to fine sand; little granules to large pebbles, subround; soft; moist; gray (10YR 5/1). NOTE: Glacial till.		
20 -20	4	17.0-27.0	10.0	0.0					
				0.0					
				0.0					
				0.1					
				0.0					
				0.0					
25 -25				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0			(29.0'-35.0') SAND, very fine to fine, subround; trace silt; well sorted; moist; very pale brown (10YR 7/3).		

Remarks: bgs = below ground surface
Groundwater encountered from 59.0'-60.5' bgs.
No odor or staining observed.

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Date Start: 10/8/2013
Date Finish: 10/8/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: HA to 6.0'/Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-OS78
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	5	27.0-37.0	9.0	0.0 0.0 0.0 0.0 0.0					
35 -35				0.0 0.0			(35.0'-43.0') CLAY and SILT, low to non-plastic, no dilatancy; little fine to medium sand, subround; little granules to very large pebbles, subangular; moist; very stiff; dark gray (10YR 4/1). NOTE: Trace to little large to very large fine sandstone fragments, angular; light gray (10YR 7/1). Glacial Till.		
	6	37.0-47.0	9.0	0.1 0.0 0.0 0.0 0.0 0.0					
40 -40							(43.0'-45.0') SAND, very fine, subround; trace silt; well sorted; dry to moist; very pale brown (10YR 7/3).		
45 -45				0.0 0.0			(45.0'-49.0') CLAY and SILT, non-plastic, no dilatancy; little to fine to medium sand, subround; little granules to medium pebbles, subround; moist; very stiff; dark gray (10YR 4/1). NOTE: Glacial till.		

Remarks: bgs = below ground surface
Groundwater encountered from 59.0'-60.5' bgs.
No odor or staining observed.

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Date Start: 10/8/2013 **Date Finish:** 10/8/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** HA to 6.0'/Sonic/Air Knife **Sampling Method:** Sonic continous **Rig Type:** Sonic/Air Knife **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 77.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OS78** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
				0.0					
50 -50	7	47.0-57.0	10.0	0.0			(49.0'-59.0') CLAY and SILT, non-plastic, no dilatancy; some fine to medium sand; little granules to very large pebbles, subround; moist; very stiff; dark gray (10YR 4/1). NOTE: Little to some large to very large fine sandstone fragments, angular; light gray (10YR 7/1). Sandstone contains shale laminations. Glacial till.		
				0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
60 -60	8	57.0-67.0	10.0	0.0			(59.0'-60.5') SAND, very fine to fine; trace granules to medium pebbles, subangular; trace silt; poorly sorted; moist to wet; pale brown (10YR 6/3).		
				0.0			(60.5'-68.0') SANDSTONE, very fine; light gray with some shale laminations. NOTE: Some of this sandstone is pulverized and some cores.		
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 59.0'-60.5' bgs.
No odor or staining observed.

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Date Start: 10/8/2013
Date Finish: 10/8/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: HA to 6.0'/Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 77.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-OS78
Client: RACER
Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
65 -65				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
70 -70	9	67.0-77.0	10.0	0.0			(68.0'-76.0') SHALE with little sandstone.		
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					
				0.0			(76.0'-77.0') SANDSTONE rock core. NOTE: Saginaw Formation.		
							End of boring at 77.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 59.0'-60.5' bgs.
No odor or staining observed.

Date Start: 10/9/2013 **Date Finish:** 10/9/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** Sonic/Air Knife **Sampling Method:** Sonic continous **Rig Type:** Sonic/Air Knife **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 85.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OU142** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				0.0			(0.0'-1.0') CONCRETE.		
	1	0.0-6.0	6.0	0.1 0.0 0.0 0.0 0.0			(1.0'-6.0') Fill material. SAND, very fine to fine, subround; trace granules to small pebbles, subround; little silt; well sorted; moist to wet; yellowish brown (10YR 5/6). NOTE: Some crushed concrete.		
5 / -5									
	2	6.0-10.0	4.0	0.0 0.0 0.0 0.0			(6.0'-7.0') Concrete subfloor. (7.0'-8.0') SAND, very fine to fine, subround; little silt; well sorted; moist; yellowish brown (10YR 5/6). (8.0'-27.0') CLAY, little silt, high plasticity, no dilatancy; little very fine to fine sand; trace to little granules to very large pebbles, subround; moist; medium stiff to stiff; gray (10YR 5/1). NOTE: Glacial till.		
10 / -10				0.1					
	3	10.0-17.0	9.0	0.0 0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 1.0'-6.0' bgs.
No odor or staining observed.

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Date Start: 10/9/2013
Date Finish: 10/9/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 85.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-OU142**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
15 -15				0.0 0.0 0.0 0.0					
20 -20	4	17.0-27.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
25 -25				0.0 0.0			(27.0'-29.0') CLAY, little silt, high plasticity, no dilatancy; trace very fine to fine sand; trace granules to medium pebbles, subround; moist; soft; gray (10YR 5/1). NOTE: Glacial till.		

Remarks: bgs = below ground surface
Groundwater encountered from 1.0'-6.0' bgs.
No odor or staining observed.

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Date Start: 10/9/2013 **Date Finish:** 10/9/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** Sonic/Air Knife **Sampling Method:** Sonic continous **Rig Type:** Sonic/Air Knife **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 85.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OU142** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
30 -30	5	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			(29.0'-36.0') CLAY, some silt; low plasticity, no dilatancy; little fine sand; little granules to large pebbles, subround; moist; very stiff; dark gray (10YR 4/1). NOTE: Glacial till.		
35 -35							(36.0'-52.0') CLAY, some silt, medium to high plasticity, no dilatancy; little very fine to fine sand; little granules to very large pebbles, subround; moist; stiff; dark gray (10YR 4/1). NOTE: Glacial till.		
40 -40	6	37.0-47.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
45 -45									

Remarks: bgs = below ground surface
Groundwater encountered from 1.0'-6.0' bgs.
No odor or staining observed.

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Date Start: 10/9/2013 **Date Finish:** 10/9/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** Sonic/Air Knife **Sampling Method:** Sonic continous **Rig Type:** Sonic/Air Knife **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 85.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OU142** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.)	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
					0.0 0.0					
50	-50	7	47.0-57.0	10.0	0.0 0.1 0.0 0.2 0.1					
					0.0 0.1 0.0			(52.0'-55.0') SAND, very fine to fine, subround; little silt; well sorted; moist; very pale brown (10YR 7/3).		
55	-55				0.1 0.0			(55.0'-57.0') SAND, fine to coarse; little to some granules to large pebbles, subangular; little silt; poorly sorted; moist; light brownish gray (10YR 6/2).		
		8	57.0-67.0	10.0	0.1 0.1 0.0			(57.0'-69.0') SILT, trace to little clay, non-plastic, no dilatancy; some very fine to fine sand, subround; dry to moist; stiff; dark gray (10YR 4/1). NOTE: Some large to small sandstone fragments; trace shale fragments. Weathered sandstone.		
60	-60				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 1.0'-6.0' bgs.
No odor or staining observed.

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Date Start: 10/9/2013 **Date Finish:** 10/9/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** Sonic/Air Knife **Sampling Method:** Sonic continous **Rig Type:** Sonic/Air Knife **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 85.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-OU142** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.2					
				0.1					
				0.1					
				0.2					
65 -65				0.4					
				0.3					
				0.0					
				0.0					
				0.0			(69.0'-74.0') SANDSTONE and interbedded SHALE; some large sandstone fragments with fine black shale laminations; pulverized sandstone and shale.		
70 -70	9	67.0-74.0	7.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0			(74.0'-75.0') SHALE, black.		
75 -75	10	74.0-77.0	3.0	0.0			(75.0'-85.0') SANDSTONE cores, weathered and fractured. NOTE: Saginaw Formation.		
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 1.0'-6.0' bgs.
No odor or staining observed.

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Date Start: 10/9/2013
Date Finish: 10/9/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic/Air Knife
Sampling Method: Sonic continous
Rig Type: Sonic/Air Knife
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 85.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-OU142**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
85 -85							End of boring at 85.0' bgs.		
90 -90									

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Remarks: bgs = below ground surface
Groundwater encountered from 1.0'-6.0' bgs.
No odor or staining observed.

Date Start: 10/18/2013 **Date Finish:** 10/22/2013 **Drilling Company:** Cascade **Driller's Name:** John Roberts **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 95.0 **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-PU122** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** Sunny, 55 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
	1	0.0-6.0	6.0	0.0 0.0 0.0 0.0 0.0 0.0			(0.0'-0.5') ASPHALT. (0.5'-7.0') SAND, very fine to coarse, trace granules to small pebbles, subround; little to some silt; poorly sorted; moist to wet; brownish yellow (10YR 6/8). NOTE: Fill material.		
5 / -5									
	2	6.0-10.0	4.0	0.0 0.0 0.0 0.0 0.0			(7.0'-11.0') CLAY, some silt, medium plasticity, no dilatancy; little fine sand, trace granules to medium pebbles, subround; moist; medium stiff to soft; pale brown (10YR 6/3).		
10 / -10									
	3	10.0-20.0	9.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			(11.0'-18.0') CLAY, some silt, medium plasticity, no dilatancy; little very fine to fine sand, trace granules to large pebbles, subround; moist; medium stiff; grayish brown (10YR 5/2). NOTE: Glacial Till.		
15 / -15									

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-7.0', 18.0'-19.0', and 23.0'-24.0' bgs.
No odor or staining observed.

Date Start: 10/18/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 95.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PU122**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 55 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			(18.0'-19.0') SAND, fine to medium, trace coarse to granules, subangular; little silt; poorly sorted; wet; light brownish gray (10YR 6/2).		
				0.0			(19.0'-23.0') CLAY, some silt, no dilatancy; little very fine to fine sand, trace granules to large pebbles, subround; moist; stiff; grayish brown (10YR 5/2). NOTE: Glacial Till; medium to high plasticity.		
20 -20				0.0					
				0.0					
				0.0					
				0.2			(23.0'-24.0') SAND, very fine to fine, subround; little silt; well sorted; wet; light brownish gray (10YR 6/2).		
				0.1			(24.0'-32.0') CLAY, some silt, high plasticity, no dilatancy; little very fine to fine sand, subround; trace granules to large pebbles, subround; moist; medium stiff; gray (10YR 5/1). NOTE: Glacial Till.		
25 -25	4	20.0-30.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
30 -30				0.0					
				0.0					
				0.0			(32.0'-38.0') CLAY and SILT, medium to low plasticity, slow dilatancy; little to some very fine to fine sand; trace granules to small pebbles, subround; moist; medium stiff; gray (10YR 5/1).		
				0.0					
				0.0					
35 -35	5	30.0-40.0	9.0	0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-7.0', 18.0'-19.0', and 23.0'-24.0' bgs.
No odor or staining observed.

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Date Start: 10/18/2013 **Date Finish:** 10/22/2013 **Drilling Company:** Cascade **Driller's Name:** John Roberts **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 95.0 **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-PU122** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** Sunny, 55 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.1			(38.0'-49.0') SAND, fine, subround; little silt; well sorted; dry; light brownish gray (10YR 6/2).		
				0.2					
40 -40				0.1					
				0.0					
				0.0					
				0.2					
				0.1					
45 -45	6	40.0-50.0	7.5	0.1					
				0.0					
				0.0					
				0.0					
				0.0			(49.0'-58.0') CLAY and SILT, non-plastic, no dilatancy; little very fine to fine sand, trace granules to very large pebbles, subround; dry to moist; stiff to very stiff; gray (10YR 5/1). NOTE: Glacial Till; trace fine sandstone.		
50 -50				0.1					
				0.1					
				0.2					
				0.0			NOTE: Increase in very fine to fine sand from 53.0-58.0' bgs.		
				0.1					
55 -55	7	50.0-60.0	9.0	0.1					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-7.0', 18.0'-19.0', and 23.0'-24.0' bgs.
No odor or staining observed.

Date Start: 10/18/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 95.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PU122**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 55 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			(58.0'-63.0') SANDSTONE, pulverized with some small to large fragments; fine grained; light gray (10YR 7/2).		
				0.0					
60 -60				0.0					
				0.0					
	8	60.0-65.0	5.0	0.0					
				0.0			(63.0'-81.0') SANDSTONE and SHALE, fine black laminations within the large sandstone fragments; some small to medium fragments of shale.		
				0.0					
65 -65				0.0					
				0.0					
	9	65.0-70.0	5.0	0.0					
				0.0					
				0.0					
70 -70				0.0					
				0.0					
	10	70.0-75.0	5.0	0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-7.0', 18.0'-19.0', and 23.0'-24.0' bgs.
No odor or staining observed.

Date Start: 10/18/2013
Date Finish: 10/22/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 95.0
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PU122**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Sunny, 55 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	11	75.0-80.0	5.0	0.0 0.0 0.0					
80 -80				0.0					
				0.0			(81.0'-95.0') SANDSTONE cores; trace to little shale fragments.		
	12	80.0-87.0	7.0	0.0 0.0 0.0 0.0					
85 -85				0.0					
	13	87.0-90.0	2.5	0.0 0.0 0.0					
90 -90				0.0					
	14	90.0-95.0	5.0	0.0 0.0 0.0 0.0					
95 -95							End of boring at 95.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 0.5'-7.0', 18.0'-19.0', and 23.0'-24.0' bgs.
No odor or staining observed.

Date Start: 10/17/2013 **Date Finish:** 10/18/2013 **Drilling Company:** Cascade **Driller's Name:** John Roberts **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 95.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-PV101** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.5') TOPSOIL, grass and roots.		
	1	0.0-6.0	5.0	0.0 0.0 0.0 0.0 0.0			(0.5'-7.0') SAND, very fine to fine; trace granules to small pebbles, subround; little to some silt; well sorted; dry to moist; light yellowish brown (10YR 6/4). NOTE: Fill material.		
5 / -5									
	2	6.0-10.0	4.0	0.0 0.0 0.0 0.0			(7.0'-12.0') CLAY, some silt, medium plasticity, no dilatancy; little very fine to fine sand; trace granules to large pebbles, subround; moist; stiff; grayish brown (10YR 5/2). NOTE: Glacial till.		
10 / -10									
	3	10.0-20.0	10.0	0.0 0.0 0.0			(12.0'-29.5') CLAY, some silt, high plasticity, no dilatancy; trace to little very fine to fine sand; trace granules to large pebbles, subround; moist; medium stiff; grayish brown (10YR 5/2). NOTE: Glacial till.		

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Remarks: bgs = below ground surface
Groundwater encountered from 29.5'-30.0' and 68.0'-70.0' bgs.
No odor or staining observed.

Date Start: 10/17/2013
Date Finish: 10/18/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 95.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PV101**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
15 -15				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
20 -20				0.0					
	4	20.0-30.0	9.0	0.0					
				0.0					
				0.0					
				0.0					
25 -25				0.0					
				0.0					
				0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 29.5'-30.0' and 68.0'-70.0' bgs.
No odor or staining observed.

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Date Start: 10/17/2013 **Date Finish:** 10/18/2013 **Drilling Company:** Cascade **Driller's Name:** John Roberts **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 95.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P2-PV101** **Client:** RACER **Location:** RACER Lansing Plant 2 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(29.5'-30.0') SAND, medium to coarse; trace granules, subangular; little silt; poorly sorted; moist to wet; grayish brown (10YR 5/2).		
30 -30				0.0			(30.0'-38.0') CLAY and SILT, medium to low plasticity, no dilatancy; little very fine to fine sand, trace to little granules to large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial till.		
	5	30.0-40.0	9.0	0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.1					
				0.0					
				0.1			(38.0'-49.0') SAND, very fine to fine, subround; little silt; well sorted; dry; light gray (10YR 7/1).		
				0.1					
40 -40				0.2					
	6	40.0-50.0	9.0	0.3					
				0.1					
				0.1					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 29.5'-30.0' and 68.0'-70.0' bgs.
No odor or staining observed.

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Date Start: 10/17/2013
Date Finish: 10/18/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 95.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PV101**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.2			NOTE: From 46.0'-49.0' bgs., increase in silt; moist to wet.		
				0.1					
				0.0					
				0.0					
				0.0			(49.0'-62.0') CLAY and SILT, non-plastic, no dilatancy; little very fine to fine sand; trace granules to very large pebbles, subround; dry to moist; very stiff; gray (10YR 5/1). NOTE: Trace granules to very large fine sandstone fragments.		
50 -50				0.0					
	7	50.0-60.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
60 -60				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 29.5'-30.0' and 68.0'-70.0' bgs.
No odor or staining observed.

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Date Start: 10/17/2013
Date Finish: 10/18/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 95.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PV101**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
	8	60.0-66.0	6.2	0.0			(62.0'-65.0') Shale with some fine grained sandstone, pulverized with some small to large fragments.		
				0.0					
				0.0					
65 -65				0.0			(65.0'-71.0') SANDSTONE, fine grained, pulverized with some large fragments; light gray (10YR 7/2).		
	9	66.0-70.0	4.0	0.0					
				0.0			NOTE: From 68.0'-70.0' bgs., large sandstone fragments with wet light gray CLAY and SILT in between.		
				0.0					
70 -70				0.0					
				0.0			(71.0'-73.0') SANDSTONE, some shale, pulverized; little small to medium sandstone fragments.		
	10	70.0-77.0	6.0	0.0					
				0.0			(73.0'-76.0') CLAY and SILT, non-plastic, no dilatancy; little fine sand, subround; dry to moist; stiff; gray (10YR 5/1). NOTE: Sample from 70.0'-77.0' bgs., was retrieved after a lot of vibration and back and forth motion from Sonic, some possibly sluff.		
				0.0					
75 -75				0.0					
				0.0			(76.0'-95.0') SHALE, black, little to some small to large fragments, mostly pulverized; trace fine sandstone fragments.		

Remarks: bgs = below ground surface
Groundwater encountered from 29.5'-30.0' and 68.0'-70.0' bgs.
No odor or staining observed.

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Date Start: 10/17/2013
Date Finish: 10/18/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 95.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PV101**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	11	77.0-80.0	3.0	0.0 0.0 0.0					
80 -80									
	12	80.0-87.0	7.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			NOTE: From 80.5'-81.0' bgs., sandstone core.		
85 -85									
	13	87.0-90.0	3.0	0.0 0.0 0.0					
90 -90									
	14	90.0-95.0	5.0	0.0 0.0 0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 29.5'-30.0' and 68.0'-70.0' bgs.
No odor or staining observed.

Date Start: 10/17/2013
Date Finish: 10/18/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 95.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PV101**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0 0.0					
95 *95*							End of boring at 95.0' bgs.		
100 *100*									
105 *105*									

Remarks: bgs = below ground surface
Groundwater encountered from 29.5'-30.0' and 68.0'-70.0' bgs.
No odor or staining observed.

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Date Start: 10/22/2013
Date Finish: 10/23/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 10.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 103.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-PV76

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.5') TOPSOIL and grass with roots.		
				0.0			(0.5'-10.0') CLAY, some silt, medium to high plasticity, no dilatancy; little fine sand, trace granules to large pebbles, subround; moist; stiff; yellowish brown (10YR 5/6).		
	1	0.0-6.0	6.0	0.0					
				0.0					
				0.0					
5 / -5				0.0					
				0.0					
				0.0					
	2	6.0-10.0	4.0	0.0					
				0.0					
				0.0					
10 / -10				0.2			(10.0'-11.0') SAND, medium to coarse, trace granules, subround; little silt; poorly sorted; wet; brownish yellow (10YR 6/8).	▼	
				0.1			(11.0'-14.0') CLAY, some silt, medium plasticity, no dilatancy; little very fine to fine sand; trace granules to large pebbles, subround; moist; stiff; pale brown (10YR 6/3).		
				0.0					
				0.0					
				0.0			(14.0'-28.0') CLAY, little silt, high plasticity, no dilatancy; trace very fine to fine sand, trace granules to large pebbles, subround; stiff to very stiff; gray (10YR 5/1).		
15 / -15	3	10.0-20.0	10.0	0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-11.0' bgs.
No odor or staining observed.

Date Start: 10/22/2013
Date Finish: 10/23/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 10.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 103.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-PV76

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
20 -20				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
25 -25	4	20.0-30.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0			(28.0'-31.0') CLAY and SILT, low plasticity to non-plastic, no dilatancy; little very fine to fine sand, trace granules to medium pebbles, subround; moist; stiff; gray (10YR 6/1).		
30 -30				0.0					
				0.0			(31.0'-32.0') SAND, medium, subround; trace silt; well sorted; dry; light gray (10YR 7/1).		
				0.0			(32.0'-61.0') SAND, very fine to fine, subround; trace to little granules to large pebbles; and SILT, non-plastic, no dilatancy; dry to moist; poorly sorted; soft; grayish brown (01yR 5/2).		
	5	30.0-37.0	7.0	0.0					
35 -35				0.0					
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-11.0' bgs.
No odor or staining observed.

Date Start: 10/22/2013
Date Finish: 10/23/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 10.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 103.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-PV76

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	6	37.0-40.0	3.0	0.0 0.0 0.0					
40 -40				0.0 0.0 0.0 0.0 0.0					
45 -45	7	40.0-50.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0					
50 -50				0.0 0.0 0.0 0.0 0.0			NOTE: Little clay near 50.0' bgs.		
55 -55	8	50.0-60.0	10.0	0.0 0.0 0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-11.0' bgs.
No odor or staining observed.

Date Start: 10/22/2013
Date Finish: 10/23/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 10.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 103.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P2-PV76**

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
60 -60				0.0			NOTE: Glacial till with very little trace clay; trace small to medium fine sandstone fragments near 60.0' bgs.		
				0.0			(61.0'-66.0') SANDSTONE with fine black laminations; pulverized with some small to large fragments; some shale fragments; some silt.		
				0.0					
	9	60.0-67.0	7.0	0.0					
65 -65				0.0					
				0.0					
				0.0			(66.0'-68.0') SHALE, pulverized with trace small fragments; dark grayish brown (10YR 4/2).		
				0.0					
	10	67.0-70.0	3.0	0.0			(68.0'-85.0') SANDSTONE, pulverized with some medium to large fragments; light gray (10YR 7/1).		
				0.0					
70 -70				0.0					
				0.0					
	11	70.0-75.0	5.0	0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-11.0' bgs.
No odor or staining observed.

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Date Start: 10/22/2013
Date Finish: 10/23/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 10.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 103.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-PV76

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	12	75.0-80.0	5.0	0.0					
				0.0					
80 -80				0.0					
				0.0					
	13	80.0-85.0	5.0	0.0					
				0.0					
85 -85				0.0					
				0.0			(85.0'-103.0') SHALE with little sandstone.		
	14	85.0-90.0	5.0	0.0					
				0.0					
90 -90				0.0					
				0.0					
	15	90.0-95.0	5.0	0.0					
				0.0					
95 -95				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-11.0' bgs.
No odor or staining observed.

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Date Start: 10/22/2013
Date Finish: 10/23/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): 10.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 103.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P2-PV76

Client: RACER

Location: RACER Lansing Plant 2

Weather Conditions: Cloudy, 45 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	16	95.0-100.0	5.0	0.0 0.0 0.0					
100-100				0.0					
	17	100.0-103.0	3.0	0.0 0.0					
				0.0			End of boring at 103.0' bgs.		
105-105									
110-110									
115-115									

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Remarks: bgs = below ground surface
Groundwater encountered from 10.0'-11.0' bgs.
No odor or staining observed.

Date Start: 7/26/2013
Date Finish: 7/26/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.5' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IC89

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Partly Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				NA			(0.0-0.4') ASPHALT.		
				0.4			(0.4-2.0') SAND, very fine, trace granules to small pebbles, subrounded to subangular; poorly sorted; moist; dark yellowish brown (10YR 4/6). NOTE: Fill.		
	1	0.0-6.0	6.0	0.4			(2.0-4.0') CLAY, little silt, low plasticity; and SAND, fine, trace small to large pebbles, subrounded to subangular; medium stiff; wet; brown (10YR 4/3).		
				0.3					
				0.5			(4.0-8.0') CLAY and SILT, no dilatancy; little very fine sand; trace granules to medium pebbles, subrounded to subanglar; very sitff; moist; brown (10YR 5/3).		
5 / -5				0.5					
				0.2					
				0.1					
				0.1			(8.0-14.0') CLAY, little silt, medium plasticity, slow dilatancy; trace granules to medium pebbles, subrounded to subangular; medium stiff; moist; brown (10YR 4/3).		
10 / -10	2	6.0-17.0	11.0	0.1					
				0.0					
				0.0					
				0.0					
				0.0			NOTE: Wood debris at 13.0' bgs.		
				0.0			(14.0-16.0') PEAT; wood debris, roots; dry; very dark brown (10YR 2/2).		
15 / -15				0.0					
				0.0			(16.0-18.0') SILT, little clay, no dilatancy; moist; very dark grayish brown (2.5Y 3/2). NOTE: Interbedded peat layers, some roots.		

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Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-4.0', 18.0'-20.0', 28.0'-36.0', 37.0'-42.0' and 53.0'-57.0' bgs.
No odor or staining observed.

Date Start: 7/26/2013 **Date Finish:** 7/26/2013 **Drilling Company:** Cascade **Driller's Name:** Jim **Drilling Method:** HA to 6.0'/RotoSonic **Sampling Method:** Sonic continous **Rig Type:** RotoSonic **Water Level Start (ft. bgs.):** 2.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 72.5' bgs **Surface Elevation:** **Descriptions By:** C. Snyder	**Well/Boring ID:** **VAP-P3-IC89** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Partly Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	3	17.0-27.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(18.0-20.0') SILT and CLAY, high plasticity, slow dilatancy; very soft; wet; gray (10YR 5/1). (20.0-28.0') CLAY, some silt, low plasticity, no dilatancy; little very fine sand, trace granules to small pebbles, subrounded to subangular; medium stiff; moist; grayish brown (10YR 5/2).		
25 -25									
30 -30	4	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(28.0-36.0') SILT, rapid dilatancy; and SAND, fine to medium; soft; wet; grayish brown (10YR 5/2). (36.0-37.0') CLAY, some silt, low plasticity, no dilatancy; little small to medium pebbles, subrounded to subangular; little very fine sand; stiff; moist; grayish brown (10YR 5/2).		
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-4.0', 18.0'-20.0', 28.0'-36.0', 37.0'-42.0' and 53.0'-57.0' bgs.
No odor or staining observed.

Date Start: 7/26/2013
Date Finish: 7/26/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.5' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IC89

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Partly Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	5	37.0-47.0	10.0	0.0 0.0 0.0 0.0 0.0			(37.0-42.0') SILT, rapid dilatancy; and SAND, fine to medium, trace small to medium pebbles, subrounded to subangular; soft; wet; grayish brown (10YR 5/2). NOTE: Medium stiff at 40.0' bgs.		
45 -45				0.0 0.0 0.0 0.0 0.0			(42.0-49.0') SAND, fine to coarse, subrounded to subangular; trace very coarse sand to granules, subrounded to subangular; poorly sorted; dry; grayish brown (10YR 5/2). NOTE: Interbedded silt layers from 47.0-49.0' bgs.		
50 -50	6	47.0-57.0	10.0	0.0 0.0 0.0 0.0 0.0			(49.0-51.0') SAND, fine to medium, trace small to medium pebbles, subrounded; trace granules; little silt; poorly sorted; moist; dark grayish brown (10YR 4/2). (51.0-53.0') SAND, fine to coarse, subrounded to subangular; trace very coarse sand to granules, subangular to subrounded; poorly sorted; dry; grayish borwn (10YR 5/2). NOTE: Interbedded stiff clay layers.		
55 -55				0.0 0.0 0.0 0.0 0.0			(53.0-57.0') SAND, very fine to fine; little silt; well sorted; moist to wet; light brownish gray (10YR 6/2).		

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Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-4.0', 18.0'-20.0', 28.0'-36.0', 37.0'-42.0' and 53.0'-57.0' bgs.
No odor or staining observed.

Date Start: 7/26/2013
Date Finish: 7/26/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 2.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 72.5' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IC89

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Partly Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	7	57.0-67.0	10.0	0.0 0.0 0.0 0.0 0.0			(57.0-62.0') SAND, fine to medium; trace small pebbles, subrounded; some silt; slow dilatancy; moist; grayish brown (10YR 5/2).		
				0.0			(62.0-62.7') SILT, little clay, high plasticity, slow dilatancy; little sand, trace small to medium pebbles, subrounded; soft; grayish brown (10YR 5/2).		
65 -65				0.0 0.0 0.0 0.0			(62.7-69.5') CLAY, little silt, low plasticity, no dilatancy; little small pebbles, subrounded; trace medium to large pebbles, subrounded to subangular; very stiff; moist; dark gray (10YR 4/1).		
	8	67.0-70.0	3.0	0.0 0.0 0.0					
70 -70	9	70.0-72.5	1.5	NA NA			(69.5-72.5') SANDSTONE; very fine to fine grained; soft; gray (10YR 6/1). NOTE: Interbedded silts from 70.0-71.0'. NOTE: Saginaw Formation.		
							End of boring at 72.5' bgs.		
75 -75									

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Remarks: bgs = below ground surface
Groundwater encountered from 2.0'-4.0', 18.0'-20.0', 28.0'-36.0', 37.0'-42.0' and 53.0'-57.0' bgs.
No odor or staining observed.

Date Start: 7/25/2013
Date Finish: 7/25/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 73.5' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IR43

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				NA			(0.0-0.4') ASPHALT.		
	1	0.0-6.0	6.0	0.0			(0.4-4.0') SAND, very fine to medium; little granules to small pebbles, subrounded to subangular; some clay; poorly sorted; dry; drak gray (10YR 4/1).		
				0.0					
				0.					
5 / -5				0.0			(4.0-9.5') CLAY, some silt, high plasticity, rapid dilatancy; trace granules to small pebbles, subrounded to subangular; very soft; wet; olive (5Y 4/3).		
				0.8					
				0.0					
				0.0					
				0.0					
10 / -10	2	6.0-16.0	10.0	0.3			(9.5-11.0') PEAT, some roots; dry; very dark brown (10YR 2/2).		
				0.0					
				0.0			(11.0-16.0') CLAY, some silt, high plasticity, slow dilatancy; trace small to medium pebbles, subrounded to subangular; very soft; moist; grayish brown (10YR 5/3).		
				0.0					
				0.0					
15 / -15				0.0			NOTE: Medium stiff from 15.0-16.0' bgs.		
				0.0					
				0.0			(16.0-18.0') CLAY and SILT, high plasticity; little very fine to fine sand, trace small to medium pebbles, subrounded to subangular; soft; moist; grayish brown (10YR 5/2.)		

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Remarks: bgs = below ground surface
Groundwater encountered from 4.0'-9.5' bgs.
No odor or staining observed.
No recovery from 22.0'-34.0' bgs.

Date Start: 7/25/2013 **Date Finish:** 7/25/2013 **Drilling Company:** Cascade **Driller's Name:** Jim **Drilling Method:** HA to 6.0'/RotoSonic **Sampling Method:** Sonic continous **Rig Type:** RotoSonic **Water Level Start (ft. bgs.):** 4.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 73.5' bgs **Surface Elevation:** **Descriptions By:** C. Snyder	**Well/Boring ID:** **VAP-P3-IR43** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0			(18.0-22.0') CLAY and SILT, low plasticity; little fine sand; trace small to large pebbles, subrounded to subangular; medium stiff; moist; brown (10YR 5/3).		
20 -20	3	16.0-26.0	6.0	0.0					
				0.0					
				0.0					
				NA			(22.0-34.0') No Recovery - pushed rock.		
				NA					
25 -25				NA					
				NA					
				NA					
				NA					
30 -30	4	26.0-36.0	2.0	NA					
				NA					
				NA					
				NA					
				NA					
35 -35				0.0			(34.0-36.0') SAND, fine to medium, little small to very large pebbles, subrounded to subangular; poorly sorted; dry; light brownish gray (10YR 6/2).		
				0.0					
				0.0			(36.0-56.0') SAND, very fine, trace granules to medium pebbles, subrounded to subangular; some silt; poorly sorted; dry; gray (10YR 6/1). NOTE: Bags from 36.0'-46.0' bgs. very hot due to sonic friction.		

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Remarks: bgs = below ground surface
Groundwater encountered from 4.0'-9.5' bgs.
No odor or staining observed.
No recovery from 22.0'-34.0' bgs.

Date Start: 7/25/2013
Date Finish: 7/25/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 73.5' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IR43

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	5	36.0-46.0	8.5	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			NOTE: CLAY layer, very stiff, 2" thick; nonplastic; very dark grayish brown (10YR 3/2) at 41.0' bgs. NOTE: CLAY layer, very stiff, 1" thick; nonplastic; very dark grayish brown (10YR 3/2) at 42.0' bgs.		
45 -45									
50 -50	6	46.0-56.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
55 -55							NOTE: Moist at 55.0' bgs.		
				0.0			(56.0-60.0') SAND, very fine, little small to medium pebbles, subrounded to subangular; some silt; poorly sorted; dry; gray (10YR 6/1).		

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Remarks: bgs = below ground surface
Groundwater encountered from 4.0'-9.5' bgs.
No odor or staining observed.
No recovery from 22.0'-34.0' bgs.

Date Start: 7/25/2013
Date Finish: 7/25/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 73.5' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IR43

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	7	56.0-66.0	10.0	0.0 0.0 0.0					
60 -60				0.0			(60.0-62.0') CLAY, some silt, nonplastic; little very fine sand, trace granules to small pebbles, subrounded to subangular; very stiff; moist; dark gray (10YR 4/1).		
				0.0 0.0			(62.0-65.0') SAND, very fine, trace granules to small pebbles, subrounded to subangular; some silt; slow dilatancy; well sorted; moist; grayish brown (10YR 5/2).		
65 -65				0.0 0.0			(65.0-68.5') SAND, very fine, little granules to large pebbles, subrounded to subangular; some silt; poorly sorted; moist; grayish brown (10YR 5/2).		
	8	66.0-70.0	4.0	0.0 0.0 0.0			(68.5-69.5') SILT, slow dilatancy; little very fine sand; trace granules to medium pebbles, subrounded to subangular; soft; moist; grayish brown (10YR 5/2).		
70 -70				0.0			(69.5-73.5') SANDSTONE; interbedded with silt; soft moist; light gray (10YR 7/1). NOTE: Saginaw Formation.		
	9	70.0-73.5	3.5	0.0 0.0 0.0					
75 -75							End of boring at 73.5' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered from 4.0'-9.5' bgs.
No odor or staining observed.
No recovery from 22.0'-34.0' bgs.

Date Start: 7/22/2013
Date Finish: 7/23/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 36.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: **VAP-P3-IS63**

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				0.0			(0.0-0.3') ASPHALT.		
				0.0			(0.3-2.0') CLAY, low plasticity; some medium sand; little granules, subrounded to subangular; trace small to large pebbles, subangular; dark yellowish brown (10YR 4/6).		
	1	0.0-6.0	6.0	0.0			(2.0-5.0') SAND, fine to medium, trace granules to small pebbles, subrounded to subangular; little silt; dry to moist; yellowish brown (10YR 5/4).		
				0.4					
5 / -5				0.4					
				1.3			(5.0-16.0') CLAY, some silt, low plasticity; little very fine to fine sand, trace granules to large pebbles, subrounded to subangular; medium stiff; moist; dark gray (10YR 4/1).		
				0.0					
				1.2					
				0.2					
				0.3					
10 / -10	2	6.0-16.0	9.0	0.3					
				5.0					
				6.3					
				15.3					
				15.5					
15 / -15				20.5					
				4.5			(16.0-20.0') PEAT; some roots; moist; very dark brown.		

Remarks: bgs = below ground surface
Groundwater encountered at 36.0', from 38.0'-42.0', at 63.0' and 65.5'-70.0' bgs.
No odor or staining observed.

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Date Start: 7/22/2013 **Date Finish:** 7/23/2013 **Drilling Company:** Cascade **Driller's Name:** Jim **Drilling Method:** HA to 6.0'/RotoSonic **Sampling Method:** Sonic continous **Rig Type:** RotoSonic **Water Level Start (ft. bgs.):** 36.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 76.0' bgs **Surface Elevation:** **Descriptions By:** C. Snyder	**Well/Boring ID:** **VAP-P3-IS63** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				1.2					
				0.1					
				0.0					
20 -20	3	16.0-26.0	10.0	0.0			(20.0-26.0') SILT, some clay, medium plasticity, slow dilatancy; very soft; moist; olive gray (5Y 4/2). NOTE: Trace organics.		
				0.0					
				0.0					
				0.0					
				0.0					
25 -25				0.0			NOTE: High plasticity; color change to gray (10YR 5/1) at 25.0' bgs.		
				2.7			(26.0-27.0') PEAT and ORGANICS (roots, wood); moist; dark brown.		
				0.0			(27.0-38.5') SILT, some clay, high plasticity, rapid dilatancy; very soft; moist; dark gray (10YR 5/1).		
				0.5					
				5.5					
30 -30	4	26.0-36.0	10.0	0.5					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.0			NOTE: Wet at 36.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered at 36.0', from 38.0'-42.0', at 63.0' and 65.5'-70.0' bgs.
No odor or staining observed.

Date Start: 7/22/2013
Date Finish: 7/23/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 36.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IS63

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			NOTE: SAND, fine to medium; poorly sorted; little silt; wet from 38.0-38.5' bgs.		
40 -40	5	36.0-46.0	10.0	0.0			(38.5-42.0') SAND, very fine to fine; some silt; rapid dilatancy; poorly sorted; wet; light yellowish brown (10YR 6/4).		
45 -45				0.0			(42.0-46.0') CLAY, some silt, low to medium plasticity; trace granules to medium pebbles, subrounded to subangular; little very fine sand; medium stiff; moist; gray (10YR 5/1). NOTE: Till.		
50 -50	6	46.0-56.0	10.0	0.0			(46.0-56.0') SILT, little clay, low plasticity, slow dilatancy; some very fine sand; trace granules to small pebbles, subrounded to subangular; soft; moist; grayish brown (10YR 5/2). NOTE: Medium stiff at 51.0' bgs.		
55 -55				0.0			(56.0-61.0') SILT, little clay, low plasticity; and SAND, very fine, trace granules to medium pebbles, subrounded to subangular; poorly sorted; medium stiff; moist; grayish brown (10YR 5/2).		

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Remarks: bgs = below ground surface
Groundwater encountered at 36.0', from 38.0'-42.0', at 63.0' and 65.5'-70.0' bgs.
No odor or staining observed.

Date Start: 7/22/2013
Date Finish: 7/23/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 36.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IS63
Client: RACER
Location: RACER Lansing Plant 3

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			NOTE: Till.		
	7	56.0-66.0	10.0	0.0					
				0.0					
60 -60				0.0					
				0.0			(61.0- 65.5') SAND, fine to medium; well sorted; moist; brown (10YR 5/3).		
				0.0					
				0.0			NOTE: Wet at 63.0' bgs.		
				0.0					
65 -65				0.0					
				0.0			(65.5-70.0') SAND, medium to coarse, little fine sand; trace granules to small pebbles, subrounded; poorly sorted; wet; dark grayish brown (10YR 4/2).		
				2.5					
				1.9					
				1.8					
				0.6					
70 -70	8	66.0-76.0	10.0	0.1			(70.0-74.0') CLAY, little silt; little very fine sand; trace granules to medium pebbles, subrounded to subangular; medium stiff; moist; gray (10YR 5/1). NOTE: TIll.		
				0.3					
				0.0					
				0.0					
				0.0			(74.0-76.0') WEATHER BEDROCK, SANDSTONE and SAND, very fine grained; gray (10YR 6/1).		
75 -75				1.2					
							End of boring at 76.0' bgs.		

Remarks: bgs = below ground surface
Groundwater encountered at 36.0', from 38.0'-42.0', at 63.0' and 65.5'-70.0' bgs.
No odor or staining observed.

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Date Start: 7/24/2013 **Date Finish:** 7/24/2013 **Drilling Company:** Cascade **Driller's Name:** Jim **Drilling Method:** HA to 6.0'/RotoSonic **Sampling Method:** Sonic continous **Rig Type:** RotoSonic **Water Level Start (ft. bgs.):** 4.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 76.0' bgs **Surface Elevation:** **Descriptions By:** C. Snyder	**Well/Boring ID:** **VAP-P3-IS88** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				NA			(0.0-0.5') ASPHALT.		
				0.3			(0.5-2.0') SAND, fine to medium; well sorted; yellowish brown (10YR 5/4).		
	1	0.0-6.0	6.0	0.4			(2.0-14.0') SAND, very fine to fine, trace small to large pebbles, subrounded to subangular; and CLAY, low plasticity; soft; moist;; olive brown (2.5Y 4/3).		
				0.3				▼	
				0.3			NOTE: Wet at 4.0' bgs; very soft.		
5 / -5				0.3					
				0.2					
				0.3			NOTE: Medium stiff from 7.0-8.0' bgs.		
				0.3					
				0.3					
10 / -10	2	6.0-16.0	10.0	0.2					
				0.3					
				0.2					
				0.1					
				0.0			(14.0-15.0') CLAY, little silt, high plastiicty; medium stiff; moist; olive (5Y 4/4).		
15 / -15				0.0			(15.0-17.0') PEAT, roots, wood debris; little silt; dry; very dark brown (10YR 2/2).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0' and from 19.0'-28.0' bgs.
No odor or staining observed.

Date Start: 7/24/2013 **Date Finish:** 7/24/2013 **Drilling Company:** Cascade **Driller's Name:** Jim **Drilling Method:** HA to 6.0'/RotoSonic **Sampling Method:** Sonic continous **Rig Type:** RotoSonic **Water Level Start (ft. bgs.):** 4.0 **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 76.0' bgs **Surface Elevation:** **Descriptions By:** C. Snyder	**Well/Boring ID:** **VAP-P3-IS88** **Client:** RACER **Location:** RACER Lansing Plant 3 **Weather Conditions:** Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(17.0-19.0') SILT, some clay, medium plasticity; soft; moist; olive (5Y 4/4).		
				0.0					
				0.0			(19.0-23.0') CLAY, medium plasticity; some very fine sand, trace granules to small pebbles, subrounded to subangular; soft; wet; grayish brown (10YR 5/2).		
20 -20	3	16.0-26.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0			(23.0-28.0') SAND, very fine to medium, trace granules to small pebbles, subrounded to subangular; some silt; rapid dilatancy; poorly sorted; wet; grayish brown (10YR 5/2).		
25 -25				0.0					
				0.0					
				0.0					
				0.0			(28.0-40.0') CLAY, little silt, low plasticity, slow dilatancy; little very fine to fine sand, trace granules to medium pebbles, subrounded to subangular; medium stiff; moist; grayish brown (10YR 5/2). NOTE: Till.		
				0.0					
				0.0					
30 -30	4	26.0-36.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0' and from 19.0'-28.0' bgs.
No odor or staining observed.

Date Start: 7/24/2013
Date Finish: 7/24/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IS88

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
40 -40	5	36.0-46.0	10.0	0.0			(40.0-41.0') SILT, little clay, low plasticity, rapid dilatancy; trace very fine sand, trace small to medium pebbles, subrounded to subangular; wet; grayish brown (10YR 5/2).		
				0.0			(41.0-44'0) CLAY, little silt, low plasticity to nonplastic, slow dilatancy; and SAND, very fine, trace small to large pebbles, subrounded to subangular; stiff; moist; grayish brown (10YR 5/2).		
				0.0					
				0.0					
45 -45				0.0			(44.0-47.0') SAND, very fine to fine; well sorted; dry; gray (10YR 5/1).		
				0.0					
				0.0			(47.0-49.0') SAND, very fine; trace granules to medium pebbles, subrounded to subangular; and SILT, little clay; medium stiff to soft; moist; grayish brown (10YR 5/2).		
				0.0					
50 -50	6	46.0-56.0	10.0	0.0			(49.0-56.0') SAND, very fine to fine; well sorted; dry; gray (10YR 6/1).		
				0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0					
				0.0			(56.0-71.0') CLAY; little very fine sand, trace granules to medium pebbles, subrounded to subangular; very stiff; dry; dark gray (10YR 4/1).		

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0' and from 19.0'-28.0' bgs.
No odor or staining observed.

Date Start: 7/24/2013
Date Finish: 7/24/2013
Drilling Company: Cascade
Driller's Name: Jim
Drilling Method: HA to 6.0'/RotoSonic
Sampling Method: Sonic continous
Rig Type: RotoSonic
Water Level Start (ft. bgs.): 4.0
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: C. Snyder

Well/Boring ID: VAP-P3-IS88

Client: RACER

Location: RACER Lansing Plant 3

Weather Conditions: Sunny, 70 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
60 -60	7	56.0-66.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
65 -65									
70 -70	8	66.0-71.0	5.0	0.0 0.0 0.0 0.0 0.0					
	9	71.0-73.0	2.0	NA NA			(71.0-76.0') SANDSTONE, very fine grained; soft; dry; light gray (10YR 7/1). NOTE: Interbedded silt seams; moist; Saginaw Formation.		
75 -75	10	73.0-76.0	3.0	NA NA NA					
							End of boring at 76.0' bgs.		

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Remarks: bgs = below ground surface
Groundwater encountered at 4.0' and from 19.0'-28.0' bgs.
No odor or staining observed.

Date Start: 10/16/2013
Date Finish: 10/17/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QP71**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0				0.0			(0.0'-1.0') ASPHALT.		
				0.0			(1.0'-9.0') CLAY, some silt, high plasticity, no dilatancy; little very fine to fine sand; trace granules to large pebbles, subround; moist; stiff; yellowish brown (10YR 5/6). NOTE: Glacial till.		
	1	0.0-6.0	6.0	0.0					
				0.0					
				0.0					
5 / -5				0.0					
	2	6.0-10.0	4.0	0.0					
				0.0					
				0.0					
10 / -10				0.0			(9.0'-16.0') SAND, fine, subround; trace granules to small pebbles, subround; little silt; moist; well sorted; brownish yellow (10YR 6/8).		
	3	10.0-20.0	10.0	0.0			NOTE: From 11.0'-16.0' bgs., fine to very coarse; little small to medium pebbles, subangular; moist; poorly sorted; brownish yellow (10YR 6/8).		
				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 17.5'-18.0' bgs.
No odor or staining observed.

Date Start: 10/16/2013 **Date Finish:** 10/17/2013 **Drilling Company:** Cascade **Driller's Name:** John Roberts **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 87.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P6-QP71** **Client:** RACER **Location:** RACER Lansing Plant 6 **Weather Conditions:** NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
15 -15				0.0 0.0 0.0					
				0.0			(16.0'-17.5') CLAY and SILT, low plasticity, slow dilatancy; little very fine to fine sand; trace granules to large pebbles, subround; moist; stiff; grayish brown (10YR 5/2).		
				0.0			(17.5'-18.0') SAND, very fine to fine; trace granules to medium pebbles, subround; little silt; poorly sorted; moist to wet; light gray (10YR 7/2).		
				0.0 0.0 0.0			(18.0'-23.0') CLAY, some silt, medium plasticity, no dilatancy; little fine sand, subround; trace to little granules to very large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial till.		
20 -20				0.0					
	4	20.0-30.0	10.0	0.0 0.0 0.0					
				0.0			(23.0'-31.0') CLAY, little silt, high plasticity, no dilatancy; trace very fine sand; trace granules to large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial till.		
25 -25				0.1 0.0 0.0 0.0 0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 17.5'-18.0' bgs.
No odor or staining observed.

Date Start: 10/16/2013
Date Finish: 10/17/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QP71**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
30 -30				0.0					
	5	30.0-40.0	10.0	0.1			(31.0'-36.0') CLAY, some silt, medium plasticity, no dilatancy; little very sand; trace granules to medium pebbles, subround; moist; stiff to medium stiff; gray (10YR 5/1). NOTE: Glacial till.		
				0.1					
				0.0					
				0.0					
35 -35				0.0					
				0.0			(36.0'-39.5') SILT, little clay, non-plastic, no dilatancy; little very fine sand, subround; trace granules to small pebbles, subround; moist; stiff; pale brown (10YR 6/3).		
				0.0					
				0.0					
				0.0					
				0.0			(39.5'-40.0') SAND, very fine, subround; little silt; well sorted; moist; light gray (10YR 7/2).		
40 -40				0.0			(40.0'-47.0') CLAY and SILT, low to non-plastic, no dilatancy; little fine sand; trace to little granules to medium pebbles, subround; moist; medium stiff to stiff; gray (10YR 5/1). NOTE: Glacial till.		
	6	40.0-50.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
				0.0					
45 -45				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 17.5'-18.0' bgs.
No odor or staining observed.

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Date Start: 10/16/2013
Date Finish: 10/17/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QP71**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0			(47.0'-49.0') SAND, very fine, subround; little silt; well sorted; dry; light gray (10YR 7/2).		
				0.0					
				0.0			(49.0'-52.0') CLAY and SILT, non-plastic, no dilatancy; little fine to medium sand; trace granules to large pebbles, subround; dry to moist; stiff to very stiff; gray (10YR 5/1). NOTE: Glacial till.		
50 -50				0.0					
				0.0					
	7	50.0-60.0	6.0	0.0			(52.0'-56.0') SAND, fine to medium, subround; little silt; well sorted; dry; light gray (10YR 7/2).		
				0.0					
				0.0					
55 -55				0.0					
				NA			(56.0'-70.0') CLAY and SILT, non-plastic, no dilatancy; little fine to medium sand; trace granules to very large pebbles, subround; dry; stiff to very stiff; gray (10YR 5/1). NOTE: Glacial till.		
				NA					
				NA					
				NA					
60 -60				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 17.5'-18.0' bgs.
No odor or staining observed.

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Date Start: 10/16/2013
Date Finish: 10/17/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QP71**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	8	60.0-70.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			NOTE: Near 63.0' bgs, trace fine grained sandstone fragments.		
65 -65									
70 -70							(70.0'-72.0') SANDSTONE, pulverized; little fragments of fine grained sandstone; trace fine shale laminations.		
	9	70.0-75.0	5.0	0.0 0.0 0.0 0.0 0.0 0.0			(72.0'-87.0') SHALE, pulverized; some small to large fragments of shale; trace fine sandstone.		
75 -75				0.0 0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 17.5'-18.0' bgs.
No odor or staining observed.

Date Start: 10/16/2013
Date Finish: 10/17/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QP71**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: NA

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	10	75.0-80.0	5.0	0.0 0.0 0.0					
80 -80									
	11	80.0-87.0	7.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			NOTE: From 86.0'-86.5' bgs., sandstone fragments, some large.		
85 -85									
							End of boring at 87.0' bgs.		
90 -90									

Remarks: bgs = below ground surface
Groundwater encountered from 17.5'-18.0' bgs.
No odor or staining observed.

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Date Start: 10/14/2013
Date Finish: 10/15/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 85.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV91**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
	1	0.0-6.0	6.0	0.0 0.0 0.0 0.0 0.0 0.0			(0.0'-0.5') ASPHALT. (0.5'-9.5') CLAY, some silt, high plasticity, no dilatancy; trace very fine sand; trace granules to large pebbles, subround; dry to moist; stiff to medium stiff; yellowish brown (10YR 5/6). NOTE: Glacial till.		
5 / -5									
	2	6.0-10.0	0.5	0.0 0.0 0.0 0.0			(9.5'-11.0') CLAY, little to some silt, high plasticity, no dilatancy; trace very fine sand; trace granules to large pebbles, subround; moist; medium stiff; grayish brown (10YR 5/2). NOTE: Glacial till.		
10 / -10									
	3	10.0-17.5	7.5	0.0 0.0 0.0 0.0 0.0 0.0			(11.0'-13.0') CLAY and SILT, non-plastic, no dilatancy; little very fine to fine sand; granules to large pebbles, subround; dry; stiff; grayish brown (10YR 5/2). (13.0'-15.0') CLAY, some silt, high plasticity, no dilatancy; trace very fine sand; trace granules to large pebbles, subround; moist; medium stiff; grayish brown (10YR 5/2). NOTE: Glacial till. (15.0'-17.5') CLAY and SILT, non-plastic, no dilatancy; trace to little very fine to fine sand; trace granules to large pebbles, subround; dry; very stiff; gray (10YR 5/1). NOTE: Glacial till.		
15 / -15									

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 10/14/2013
Date Finish: 10/15/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 85.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV91**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(17.5'-19.0') SLUFF.		
				0.0					
				0.0			(19.0'-32.0') CLAY and SILT, non-plastic, no dilatancy; trace to little very fine to fine sand; trace granules to large pebbles, subround; dry; very stiff; gray (10YR 5/1). NOTE: Glacial till.		
20 -20				0.0					
				0.0					
	4	17.5-30.0	9.0	0.0					
				0.0					
				0.0					
25 -25				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
30 -30				0.0					
				0.0					
	5	30.0-35.0	5.0	0.0			(32.0'-36.0') SAND, fine, subround; little silt; well sorted; moist; grayish brown (10YR 5/2).		
				0.0					
				0.0					
35 -35				0.0					
				0.0			(36.0'-41.0') CLAY and SILT, low plasticity to non-plastic, no to slow dilatancy; little very fine to medium sand; trace granules to very large pebbles, subround; moist; stiff; grayish brown (10YR 5//2). NOTE: Glacial till.		

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 10/14/2013 **Date Finish:** 10/15/2013 **Drilling Company:** Cascade **Driller's Name:** John Roberts **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 85.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P6-QV91** **Client:** RACER **Location:** RACER Lansing Plant 6 **Weather Conditions:** Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	6	35.0-40.0	5.0	0.0 0.0 0.0					
40 -40	7	40.0-49.0	9.0	0.0 0.0 0.0 6.4 9.5 11.1			(41.'0-46.0') SAND, very fine to fine, subround; trace sit; well sorted; dry to moist; pale brown (10YR 6/3).		
45 -45				0.5 0.4 0.8			(46.0'-50.0') SAND, very fine, subround; trace silt; well sorted; dry; light gray (10YR 7/2). NOTE: PID hits could be a result of "cooked" sample, sample very hot.		
50 -50	8	49.0-60.0	9.0	0.0 0.0 0.0 0.0 0.1 0.0 0.0 0.0			(50.0'-65.0') CLAY and SILT, non-plastic, no dilatancy; little very fine to fine sand; trace granules to large pebbles, subround; dry; stiff; grayish brown (10YR 5/2).		
55 -55									

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 10/14/2013
Date Finish: 10/15/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 85.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV91**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
60 -60				0.0					
	9	60.0-70.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
65 -65				0.0			(65.0'-75.0') SANDSTONE, large fragments, some pulverized. NOTE: Near 70.0' bgs., trace small fragments of sandstone.		
				0.0					
				0.0					
				0.0					
				0.0					
70 -70				0.0					
	10	70.0-75.0	5.0	0.0					
				0.0					
				0.0					
75 -75				0.0			(75.0'-78.0') SHALE, large fragments, some pulverized.		
				0.0					

Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

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Date Start: 10/14/2013
Date Finish: 10/15/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 85.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV91**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	11	75.0-80.0	5.0	0.0					
				0.0			(78.0'-85.0') SANDSTONE, large fragments, most pulverized. NOTE: Saginaw Formation.		
				0.0					
80 -80				0.0					
	12	80.0-85.0	5.0	0.0					
				0.0					
				0.0					
				0.0					
85 -85							End of boring at 85.0' bgs.		
90 -90									
95 -95									

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 10/10/2013 **Date Finish:** 10/10/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 76.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P6-QV111** **Client:** RACER **Location:** RACER Lansing Plant 6 **Weather Conditions:** Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
				NA			(0.0'-0.75') ASPHALT.		
				NA			(0.75'-6.0') CLAY and SILT; some fine sand; trace to little granules to large pebbles, subround; yellowish brown (10YR 5/6). NOTE: Fill.		
	1	0.0-6.0	6.0	NA					
				NA					
				NA					
5 / -5				NA					
				0.0			(6.0'-10.0') CLAY and SILT, medium plasticity, no dilatancy; little to some very fine to fine sand; trace to little granules to large pebbles, subround; moist; medium stiff; light brownish gray (10YR 6/2). NOTE: Glacial till.		
	2	6.0-16.0	9.0	0.0					
				0.0					
10 / -10				0.0			(10.0'-27.0') CLAY and SILT, low plasticity to non-plastic, no dilatancy; little fine to very fine sand; little granules to large pebbles, subround; dry to moist; very stiff to hard; light brownish gray (10YR 6/2). NOTE: Glacial till.		
				0.0					
				0.0					
				0.0					
				0.0					
15 / -15				0.0			NOTE: Small very fine sand lense; moist from 14.5'-14.75' bgs.		
				0.0					
				0.6					

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 10/10/2013
Date Finish: 10/10/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV111**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	3	16.0-26.0	10.0	0.7 0.8 0.5 0.2 0.1 0.0 0.0 0.0 0.0					
25 -25									
	4	26.0-36.0	10.0	0.0 0.2 0.3 0.1			(27.0'-30.0') SAND, very fine to fine, subround; little silt; well sorted; dry to moist; light gray (10YR 7/1).		
30 -30				0.0 0.1 0.0 0.0 0.0 0.0			(30.0'-39.0') CLAY and SILT, low plasticity, no dilatancy; little fine sand; little granules to very large pebbles, subround; moist; stiff to very stiff; grayish brown (10YR 5/2). NOTE: Glacial till.		
35 -35				0.0					

Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

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Date Start: 10/10/2013
Date Finish: 10/10/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV111**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	5	36.0-46.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(39.0'-50.0') SAND, very fine to fine, subround; some silt; well sorted; dry to moist; light gray (10YR 6/2).		
40 -40									
45 -45									
	6	46.0-56.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1			(50.0'-65.0') CLAY and SILT, low plasticity, no dilatancy; little fine sand; trace to little granules to large pebbles, subround; dry to moist; stiff; gray (10YR 5/1). NOTE: Some small to very large fine sandstone fragments.		
50 -50									
55 -55									
				0.0					

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 10/10/2013
Date Finish: 10/10/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 76.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV111**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
	7	56.0-66.0	10.0	0.1					
				0.0					
60 -60				0.0					
				0.0					
				0.1					
				0.0					
				0.0					
				0.0					
65 -65				0.0			(65.0'-68.0') SANDSTONE, some large fragments, fine grained; light gray (10YR 7/2). NOTE: Weathered sandstone.		
				0.0					
				0.0					
	8	66.0-76.0	10.0	0.0			(68.0'-76.0') SANDSTONE and black SHALE, weathered. NOTE: Saginaw Formation.		
				0.0					
70 -70				0.0					
				0.0					
				0.0					
				0.1					
75 -75				0.0					
				0.0					
							End of boring at 76.0' bgs.		

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Remarks: bgs = below ground surface
No groundwater encountered.
No odor or staining observed.

Date Start: 10/11/2013
Date Finish: 10/11/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV131**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
	1	0.0-6.0	6.0	NA NA NA NA NA NA			(0.0'-0.5') ASPHALT. (0.5'-9.0') CLAY, some silt, high plasticity, no dilatancy; trace to little fine sand; trace granules to large pebbles, subround; moist; stiff; yellowish brown (10YR 5/6). NOTE: Glacial till.		
5 / -5									
	2	6.0-7.0	1.0	0.0					
	3	7.0-17.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(9.0'-15.0') CLAY, some silt, high plasticity, no dilatancy; medium stiff to soft; trace to little fine sand; trace to little granules to large pebbles, subround; moist; grayish brown (10YR 5/2). NOTE: Glacial till. (15.0'-27.0') CLAY and SILT, low plasticity to non-plastic, no dilatancy; trace to little fine to medium sand; trace to little granules to large pebbles, subround; dry to moist; very stiff to hard; grayish brown (10YR 5/2).		
10 / -10									
15 / -15									

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Remarks: bgs = below ground surface
Groundwater encountered from 37.0'-40.0' and 43.0'-52.0' bgs.
No odor or staining observed.

Date Start: 10/11/2013
Date Finish: 10/11/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV131**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20 -20	4	17.0-27.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0					
25 -25							(27.0'-29.0') SAND, very fine, subround; some silt; dry; well sorted; light gray (10YR 7/1).		
				0.0			(29.0'-30.0') SILT, some very fine sand, subround; trace granules to medium pebbles, subround; no dilatancy; dry; hard; gray (10YR 5/1).		
30 -30	5	27.0-37.0	10.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			(30.0'-37.0') SAND, very fine to fine, subround; and SILT, no dilatancy; dry; well sorted; light brownish gray (10YR 6/2).		
35 -35									

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Remarks: bgs = below ground surface
Groundwater encountered from 37.0'-40.0' and 43.0'-52.0' bgs.
No odor or staining observed.

Date Start: 10/11/2013 **Date Finish:** 10/11/2013 **Drilling Company:** Cascade **Driller's Name:** Mike **Drilling Method:** Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 87.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P6-QV131** **Client:** RACER **Location:** RACER Lansing Plant 6 **Weather Conditions:** Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0			(37.0'-40.0') SILT, trace clay, non-plastic, rapid dilatancy; trace very fine sand, subround; moist to wet; medium stiff; grayish brown (10YR 5/2).		
				0.0					
				0.0					
40 -40	6	37.0-47.0	10.0	0.0			(40.0'-43.0') CLAY and SILT, medium plasticity, no dilatancy; little very fine to fine sand, subround; trace granules to large pebbles, subround; stiff; moist; grayish brown (10YR 5/2).		
				0.0					
				0.0					
				0.0			(43.0'-52.0') SILT, trace clay, non-plastic, rapid dilatancy; trace very fine sand, subround; moist to wet; medium stiff grayish brown (10YR 5/2).		
				0.0					
45 -45				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
50 -50	7	47.0-57.0	10.0	0.0					
				0.0					
				0.1					
				0.0			(52.0'-55.0') CLAY, some silt, high plasticity, no dilatancy; trace very fine to fine sand; trace small to medium pebbles, subround; moist; stiff; dark gray (10YR 4/1).		
				0.0					
				0.0					
55 -55				0.0			(55.0'-59.0') SAND, fine, subround; trace silt; well sorted; dry to moist; pale brown (10YR 6/3).		
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 37.0'-40.0' and 43.0'-52.0' bgs.
No odor or staining observed.

Date Start: 10/11/2013
Date Finish: 10/11/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV131**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
	8	57.0-67.0	10.0	0.0					
60 -60				0.0			(59.0'-62.0') CLAY and SILT, medium plasticity, no dilatancy; trace to little very fine sand; little granules to large pebbles, subround; moist; stiff; grayish brown (10YR 5/2). NOTE: Glacial till.		
				0.0					
				0.0					
				0.0			(62.0'-64.5') SAND, very fine to fine, subround, some silt; well sorted; dry to moist; light brownish gray (10YR 6/2).		
				0.0					
				0.0					
65 -65				0.0			(64.5'-68.0') SILT, some to little clay, low plasticity to non-plastic, no dilatancy; little to some very fine sand, subround; little granules to large pebbles, subround; moist; stiff; grayish brown (10YR 6/2). NOTE: Little small to medium fine light gray sandstone fragments.		
				0.0					
				0.0					
				0.0			(68.0'-87.0') Weathered fine sandstone with fine black shale laminations.		
				0.0					
70 -70	9	67.0-77.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
75 -75				0.0					
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 37.0'-40.0' and 43.0'-52.0' bgs.
No odor or staining observed.

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Date Start: 10/11/2013
Date Finish: 10/11/2013
Drilling Company: Cascade
Driller's Name: Mike
Drilling Method: Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV131**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Sunny, 75 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80	10	77.0-82.0	5.0	0.0 0.0 0.0 0.0 0.0					
85 -85	11	82.0-87.0	5.0	0.0 0.0 0.0 0.0 0.0					
							End of boring at 87.0' bgs.		
90 -90									
95 -95									

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Remarks: bgs = below ground surface
Groundwater encountered from 37.0'-40.0' and 43.0'-52.0' bgs.
No odor or staining observed.

Date Start: 10/15/2013
Date Finish: 10/16/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV150**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Cloudy, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0							(0.0'-0.5') ASPHALT.		
	1	0.0-6.0	6.0	0.0 0.0 0.0 0.0 0.0 0.0			(0.5'-11.0') CLAY, some silt, high plasticity, no dilatancy; trace very fine sand; trace granules to large pebbles, subround; moist; medium stiff; yellowish brown (10YR 5/4). NOTE: Glacial till.		
5 / -5									
	2	6.0-10.0	4.0	0.0 0.0 0.0 0.0					
10 / -10									
	3	10.0-20.0		0.0 0.0 0.0 0.0 0.0 0.0			(11.0'-21.0') CLAY and SILT, low to medium plasticity, no dilatancy; little very fine to fine sand; trace granules to large pebbles, subround; dry to moist; stiff to very stiff; grayish brown (10YR 5/2). NOTE: Glacial till.		
15 / -15									

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Remarks: bgs = below ground surface
Groundwater encountered from 40.0'-45.0' bgs.
No odor or staining observed.

Date Start: 10/15/2013 **Date Finish:** 10/16/2013 **Drilling Company:** Cascade **Driller's Name:** John Roberts **Drilling Method:** HA to 6.0'/Sonic **Sampling Method:** Sonic continous **Rig Type:** Sonic **Water Level Start (ft. bgs.):** NA **Water Level Finish (ft. btoc.):** NA	**Northing:** **Easting:** **Casing Elevation:** NA **Borehole Depth (ft. bgs.):** 87.0' bgs **Surface Elevation:** **Descriptions By:** A.Westhuis	**Well/Boring ID:** **VAP-P6-QV150** **Client:** RACER **Location:** RACER Lansing Plant 6 **Weather Conditions:** Cloudy, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
20 -20				0.0					
	4	20.0-30.0	10.0	0.0			(21.0'-29.5') CLAY, some silt, medium plasticity, no dilatancy; little fine sand; trace to little granules to large pebbles, subround; moist; stiff; gray (10YR 5/1). NOTE: Glacial till.		
				0.0					
				0.0					
				0.0					
25 -25				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
30 -30				0.0			(29.5'-34.5') SAND, very fine to fine, subround; little to some silt; well sorted; dry to moist; light gray (10YR 7/2).		
	5	30.0-40.0	5.0	0.0					
				0.0					
				0.0					
				0.0					
35 -35				0.0			(34.5'-40.0') CLAY and SILT, low plasticity to non-plastic, no dilatancy; little fine sand; trace granules to large pebbles, subround; moist; stiff; grayish brown (10YR 5/2).		
				NA					
				NA					

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Remarks: bgs = below ground surface
Groundwater encountered from 40.0'-45.0' bgs.
No odor or staining observed.

Date Start: 10/15/2013
Date Finish: 10/16/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: VAP-P6-QV150

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Cloudy, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				NA					
				NA					
40 -40				NA					
				0.0			(40.0'-45.0') SILT, trace clay, non-plastic, rapid dilatancy; some very fine sand, subround; wet; well sorted; medium stiff; grayish brown (10YR 5/2).		
	6	40.0-50.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
45 -45				0.0			(45.0'-60.0') CLAY, some silt; medium plasticity, no dilatancy; little fine sand; trace to little granules to large pebbles, subround; moist; stiff; gray (10YR 5/1).		
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
50 -50				0.0					
				0.0					
	7	50.0-60.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
55 -55				0.0					
				0.0					

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Remarks: bgs = below ground surface
Groundwater encountered from 40.0'-45.0' bgs.
No odor or staining observed.

Date Start: 10/15/2013
Date Finish: 10/16/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV150**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Cloudy, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
				0.0					
				0.0					
				0.0					
60 -60									
	8	60.0-70.0	10.0	0.0			(60.0'-65.0') SAND, very fine, subround; little to some silt; well sorted; dry; light gray (10YR 7/1).		
				0.0					
				0.0					
				0.0					
				0.0					
65 -65									
				0.0			(65.0'-87.0') SHALE and fine grained SANDSTONE, pulverized; few sandstone cores.		
				0.0					
				0.0					
				0.0					
				0.0					
				0.0					
70 -70									
				0.0					
				0.0					
	9	70.0-80.0	10.0	0.0					
				0.0					
				0.0					
				0.0					
75 -75									
				0.0					
				0.0					

Remarks: bgs = below ground surface
Groundwater encountered from 40.0'-45.0' bgs.
No odor or staining observed.

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Date Start: 10/15/2013
Date Finish: 10/16/2013
Drilling Company: Cascade
Driller's Name: John Roberts
Drilling Method: HA to 6.0'/Sonic
Sampling Method: Sonic continous
Rig Type: Sonic
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): NA

Northing:
Easting:
Casing Elevation: NA

Borehole Depth (ft. bgs.): 87.0' bgs
Surface Elevation:

Descriptions By: A.Westhuis

Well/Boring ID: **VAP-P6-QV150**

Client: RACER

Location: RACER Lansing Plant 6

Weather Conditions: Cloudy, 60 F

DEPTH (feet bgs.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
80 -80				0.0 0.0 0.0					
	10	80.0-87.0	7.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0					
85 -85							End of boring at 87.0' bgs.		
90 -90									
95 -95									

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Remarks: bgs = below ground surface
Groundwater encountered from 40.0'-45.0' bgs.
No odor or staining observed.

Appendix C

Laboratory Analytical Reports (disc)

Analytical Laboratory Report

Report ID: S55889.01(01)
Generated on 04/01/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55889.01
Project: B0064480.2013.00106
Collected Date: 03/28/2013
Submitted Date/Time: 03/28/2013 16:30
Sampled by: Colleen Barton
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55889.01	MW-13-22	Water	03/28/2013 15:45

Analytical Laboratory Report

Lab Sample ID: S55889.01
Sample Tag: MW-13-22
Collected Date/Time: 03/28/2013 15:45
Matrix: Water
COC Reference: 81207

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
1	1L Amber	None	Yes	6.0	IR
2	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	03/29/13 20:55	EMR		
Mercury Digestion	Completed			SW7471A	03/29/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	03/29/13 11:45	CCM		
Metal Digestion	Completed			3015A	03/29/13 11:00	PER		
Metal Digestion	Completed			3015A	03/29/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/01/13 10:45	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	03/29/13 17:46	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	03/29/13 17:41	PER	7440-36-0	
Arsenic, Dissolved	0.012	mg/L	0.002	SW6020	03/29/13 17:46	PER	7440-38-2	
Arsenic	0.013	mg/L	0.002	SW6020	03/29/13 17:41	PER	7440-38-2	
Barium, Dissolved	0.040	mg/L	0.010	SW6020	03/29/13 17:46	PER	7440-39-3	
Barium	0.045	mg/L	0.010	SW6020	03/29/13 17:41	PER	7440-39-3	
Boron, Dissolved	0.31	mg/L	0.04	SW6020	03/29/13 17:46	PER	7440-42-8	
Boron	0.32	mg/L	0.04	SW6020	03/29/13 17:41	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	03/29/13 17:46	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	03/29/13 17:41	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	03/29/13 17:46	PER	7440-47-3	
Chromium	0.010	mg/L	0.010	SW6020	03/29/13 17:41	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	03/29/13 17:46	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	03/29/13 17:41	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	03/29/13 17:46	PER	7440-50-8	
Copper	0.002	mg/L	0.002	SW6020	03/29/13 17:41	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	03/29/13 17:46	PER	7439-92-1	
Lead	0.004	mg/L	0.003	SW6020	03/29/13 17:41	PER	7439-92-1	
Manganese, Dissolved	0.15	mg/L	0.05	SW6020	03/29/13 17:46	PER	7439-96-5	
Manganese	0.37	mg/L	0.05	SW6020	03/29/13 17:41	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	03/29/13 16:09	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	03/29/13 16:07	CCM	7439-97-6	
Nickel, Dissolved	0.036	mg/L	0.010	SW6020	03/29/13 17:46	PER	7440-02-0	
Nickel	0.039	mg/L	0.010	SW6020	03/29/13 17:41	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	03/29/13 17:46	PER	7782-49-2	
Selenium	Not detected	mg/L	0.002	SW6020	03/29/13 17:41	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	03/29/13 17:46	PER	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	03/29/13 17:41	PER	7440-22-4	
Vanadium, Dissolved	0.005	mg/L	0.002	SW6020	03/29/13 17:46	PER	7440-62-2	
Vanadium	0.008	mg/L	0.002	SW6020	03/29/13 17:41	PER	7440-62-2	
Zinc, Dissolved	0.061	mg/L	0.010	SW6020	03/29/13 17:46	PER	7440-66-6	
Zinc	0.053	mg/L	0.010	SW6020	03/29/13 17:41	PER	7440-66-6	

Lab Sample ID: S55889.01 (continued)
Sample Tag: MW-13-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics, Dissolved								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	SW8270C	04/01/13 12:02	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	7005-72-3	
Caprolactam	7	ug/L	1	SW8270C	04/01/13 12:02	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	04/01/13 12:02	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	SW8270C	04/01/13 12:02	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	2	SW8270C	04/01/13 12:02	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	88-75-5	

Lab Sample ID: S55889.01 (continued)
Sample Tag: MW-13-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics, Dissolved (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/01/13 12:02	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	52	ug/L	5	SW8260B - SIM	03/29/13 16:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	03/29/13 17:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	03/29/13 17:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	03/29/13 17:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	03/29/13 17:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	03/29/13 17:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	10061-01-5	

Lab Sample ID: S55889.01 (continued)
Sample Tag: MW-13-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Toluene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	03/29/13 17:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	03/29/13 17:07	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF ____

81207

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.225.1940 FAX NO.: 810.229.8594 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B006448O.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Colleen Barton / CB

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs + 1,4 Dioxane (8260 SIMS)	TCL SVOCs	TAL Metals	Dissolved Metals	Special Instructions
55889.01	3-28-13	1545	MW-13-22	W	6	X	3	2					✓	✓	✓	✓	Note dissolved metals & SVOCs field filtered

RELINQUISHED BY: SIGNATURE/ORGANIZATION: CB ☒ Sampler DATE: 3-28-13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: Merit DATE: 3-28-13 TIME: 1600
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Merit DATE: 3-28-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Fawcett DATE: 3-28-13 TIME: 1630
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 6x6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Revised Report

Report ID: S55894.01(02)
Generated on 04/03/2013
Replaces report S55894.01(01) generated on 04/02/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55894.01
Project: B0064480.2013.00106
Collected Date: 03/29/2013
Submitted Date/Time: 03/29/2013 11:00
Sampled by: C. Barton
P.O. #: B0064480.2013.0

Mercury Reporting limit corrected

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55894.01	MW-13-23_77-81.5	Water	03/29/2013 10:00

Lab Sample ID: S55894.01
Sample Tag: MW-13-23_77-81.5
Collected Date/Time: 03/29/2013 10:00
Matrix: Water
COC Reference: 81208

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
2	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	04/02/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	04/02/13 11:45	CCM		
Metal Digestion	Completed			3015A	03/29/13 11:00	PER		
Metal Digestion	Completed			3015A	03/29/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/01/13 10:50	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	03/29/13 18:02	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	03/29/13 18:00	PER	7440-36-0	
Arsenic, Dissolved	0.011	mg/L	0.002	SW6020	03/29/13 18:02	PER	7440-38-2	
Arsenic	0.047	mg/L	0.002	SW6020	03/29/13 18:00	PER	7440-38-2	
Barium, Dissolved	0.047	mg/L	0.010	SW6020	03/29/13 18:02	PER	7440-39-3	
Barium	0.280	mg/L	0.010	SW6020	03/29/13 18:00	PER	7440-39-3	
Boron, Dissolved	0.48	mg/L	0.04	SW6020	03/29/13 18:02	PER	7440-42-8	
Boron	0.47	mg/L	0.04	SW6020	03/29/13 18:00	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	03/29/13 18:02	PER	7440-43-9	
Cadmium	0.0013	mg/L	0.0010	SW6020	03/29/13 18:00	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	03/29/13 18:02	PER	7440-47-3	
Chromium	0.126	mg/L	0.010	SW6020	03/29/13 18:00	PER	7440-47-3	
Cobalt, Dissolved	0.019	mg/L	0.010	SW6020	03/29/13 18:02	PER	7440-48-4	
Cobalt	0.049	mg/L	0.010	SW6020	03/29/13 18:00	PER	7440-48-4	
Copper, Dissolved	0.005	mg/L	0.002	SW6020	03/29/13 18:02	PER	7440-50-8	
Copper	0.029	mg/L	0.002	SW6020	03/29/13 18:00	PER	7440-50-8	
Lead, Dissolved	0.012	mg/L	0.003	SW6020	03/29/13 18:02	PER	7439-92-1	
Lead	0.028	mg/L	0.003	SW6020	03/29/13 18:00	PER	7439-92-1	
Manganese, Dissolved	0.89	mg/L	0.05	SW6020	03/29/13 18:02	PER	7439-96-5	
Manganese	8.04	mg/L	0.05	SW6020	03/29/13 18:00	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/02/13 15:44	CCM	7439-97-6	
Mercury	0.0010	mg/L	0.0001	SW7471A	04/02/13 15:42	CCM	7439-97-6	
Nickel, Dissolved	0.060	mg/L	0.010	SW6020	03/29/13 18:02	PER	7440-02-0	
Nickel	0.200	mg/L	0.010	SW6020	03/29/13 18:00	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	03/29/13 18:02	PER	7782-49-2	
Selenium	0.005	mg/L	0.002	SW6020	03/29/13 18:00	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	03/29/13 18:02	PER	7440-22-4	
Silver	0.0006	mg/L	0.0002	SW6020	03/29/13 18:00	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	03/29/13 18:02	PER	7440-62-2	
Vanadium	0.043	mg/L	0.002	SW6020	03/29/13 18:00	PER	7440-62-2	
Zinc, Dissolved	3.62	mg/L	0.010	SW6020	03/29/13 18:02	PER	7440-66-6	
Zinc	7.65	mg/L	0.010	SW6020	03/29/13 18:00	PER	7440-66-6	

Lab Sample ID: S55894.01 (continued)
Sample Tag: MW-13-23_77-81.5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	27	ug/L	5	SW8260B - SIM	03/29/13 15:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	76-13-1	
Acetone	124	ug/L	10	SW8260B	03/29/13 17:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	03/29/13 17:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	1634-04-4	
2-Butanone (MEK)	17	ug/L	10	SW8260B	03/29/13 17:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	03/29/13 17:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	03/29/13 17:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	03/29/13 17:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	120-82-1	

Lab Sample ID: S55894.01 (continued)
Sample Tag: MW-13-23_77-81.5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	03/29/13 17:28	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

81208

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.225.1940 FAX NO.: 810.229.8594 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013.00106
SAMPLER(S) PLEASE PRINT/SIGN NAME: C. Barton

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4 Dioxane (8260 SIMS)	TAL Metals Dissolved Metals									
~~3-28-13~~	~~1545~~	~~MW-13-23~~ (QB 3-29-13)																					
55894.01	3-29-13	1000	MW-13-23_77-81.5	W	S		3	2					✓	✓	✓								Dissolved metals & VOCs were field filtered

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	CB / Arcadis ☒ Sampler	3-29-13	1040
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	[illegible]	3/29/13	1040
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	[illegible]		
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Tabitha Fawcett	3/29/13	1100

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 6.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S55920.01(01)
Generated on 04/04/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55920.01
Project: B0064480.2013.00106
Collected Date: 04/01/2013
Submitted Date/Time: 04/02/2013 08:00
Sampled by: Colleen Barton
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55920.01	MW-13-24_96-101	Water	04/01/2013 16:15

Analytical Laboratory Report

Lab Sample ID: S55920.01
Sample Tag: MW-13-24_96-101
Collected Date/Time: 04/01/2013 16:15
Matrix: Water
COC Reference: 81209

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.0	IR
1	1L Amber	None	Yes	3.0	IR
2	125ml Plastic	HNO3	Yes	3.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/02/13 16:24	PL		
Mercury Digestion	Completed			SW7471A	04/02/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	04/02/13 11:45	CCM		
Metal Digestion	Completed			3015A	04/03/13 09:00	PER		
Metal Digestion	Completed			3015A	04/03/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/03/13 10:17	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:23	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	04/03/13 15:29	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020	04/03/13 14:23	PER	7440-38-2	
Arsenic	0.009	mg/L	0.002	SW6020	04/03/13 15:29	PER	7440-38-2	
Barium, Dissolved	0.077	mg/L	0.010	SW6020	04/03/13 14:23	PER	7440-39-3	
Barium	0.112	mg/L	0.010	SW6020	04/03/13 15:29	PER	7440-39-3	
Boron, Dissolved	0.09	mg/L	0.04	SW6020	04/03/13 14:23	PER	7440-42-8	
Boron	0.10	mg/L	0.04	SW6020	04/03/13 15:29	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/03/13 14:23	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/03/13 15:29	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/03/13 14:23	PER	7440-47-3	
Chromium	0.032	mg/L	0.010	SW6020	04/03/13 15:29	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/03/13 14:23	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	04/03/13 15:29	PER	7440-48-4	
Copper, Dissolved	0.002	mg/L	0.002	SW6020	04/03/13 14:23	PER	7440-50-8	
Copper	0.018	mg/L	0.002	SW6020	04/03/13 15:29	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:23	PER	7439-92-1	
Lead	0.015	mg/L	0.002	SW6020	04/03/13 15:29	PER	7439-92-1	
Manganese, Dissolved	0.239	mg/L	0.010	SW6020	04/03/13 14:23	PER	7439-96-5	
Manganese	0.914	mg/L	0.010	SW6020	04/03/13 15:29	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/02/13 16:33	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	04/02/13 16:31	CCM	7439-97-6	
Nickel, Dissolved	0.015	mg/L	0.010	SW6020	04/03/13 14:23	PER	7440-02-0	
Nickel	0.032	mg/L	0.010	SW6020	04/03/13 15:29	PER	7440-02-0	
Selenium, Dissolved	0.003	mg/L	0.002	SW6020	04/03/13 14:23	PER	7782-49-2	
Selenium	0.004	mg/L	0.002	SW6020	04/03/13 15:29	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/03/13 14:23	PER	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	04/03/13 15:29	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:23	PER	7440-62-2	
Vanadium	0.011	mg/L	0.002	SW6020	04/03/13 15:29	PER	7440-62-2	
Zinc, Dissolved	3.48	mg/L	0.010	SW6020	04/03/13 14:23	PER	7440-66-6	
Zinc	5.03	mg/L	0.010	SW6020	04/03/13 15:29	PER	7440-66-6	

Lab Sample ID: S55920.01 (continued)
Sample Tag: MW-13-24_96-101

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics, Dissolved								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	04/03/13 17:10	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	SW8270C	04/03/13 17:10	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	7005-72-3	
Caprolactam	6	ug/L	1	SW8270C	04/03/13 17:10	PL	105-60-2	B
Carbazole	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	04/03/13 17:10	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	SW8270C	04/03/13 17:10	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	SW8270C	04/03/13 17:10	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S55920.01 (continued)
Sample Tag: MW-13-24_96-101

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics, Dissolved (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:10	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/02/13 16:29	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/02/13 15:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/02/13 15:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/02/13 15:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/02/13 15:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/02/13 15:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	108-87-2	

Lab Sample ID: S55920.01 (continued)
Sample Tag: MW-13-24_96-101

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/02/13 15:08	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/02/13 15:08	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

81209

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.229.1940 FAX NO.: 810.229.8594 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 150061480.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Colleen Burton

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4 Dioxane (8260 SIMS)	TAL Metals	Dissolved Metals	SVOCs	Special Instructions
55920.01	4-1-13	1615	MW-13-24_96-101	W	6	1	3	2					✓	✓	✓	✓	Dissolved metals = Sulfs field filtered

RELINQUISHED BY: SIGNATURE/ORGANIZATION: CB/Arcadis ☒ Sampler DATE: 4-1-13 TIME: 1740
RECEIVED BY: SIGNATURE/ORGANIZATION: Mer DATE: 4-1-13 TIME: 1740
RELINQUISHED BY: SIGNATURE/ORGANIZATION: Mer DATE: 4-1-13 TIME: 1745
RECEIVED BY: SIGNATURE/ORGANIZATION: Merit Fridge DATE: 4-1-13 TIME: 1745

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Federal Express DATE: 4-2-13 TIME: 800

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 3.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S55939.01(01)
Generated on 04/04/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55939.01-S55939.03
Project: B0064480.2013.00106
Collected Date: 04/02/2013
Submitted Date/Time: 04/02/2013 15:30
Sampled by: C. Barton
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55939.01	MW-13-23	Water	04/02/2013 13:45
S55939.02	MW-13-25_85-90	Water	04/02/2013 14:30
S55939.03	MW-13-22	Water	04/02/2013 15:00

Analytical Laboratory Report

Lab Sample ID: S55939.01
Sample Tag: MW-13-23
Collected Date/Time: 04/02/2013 13:45
Matrix: Water
COC Reference: 81210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	04/03/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	04/03/13 11:30	CCM		
Metal Digestion	Completed			3015A	04/03/13 09:00	PER		
Metal Digestion	Completed			3015A	04/03/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/04/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:25	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	04/03/13 15:31	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020	04/03/13 14:25	PER	7440-38-2	
Arsenic	0.016	mg/L	0.002	SW6020	04/03/13 15:31	PER	7440-38-2	
Barium, Dissolved	0.040	mg/L	0.010	SW6020	04/03/13 14:25	PER	7440-39-3	
Barium	0.117	mg/L	0.010	SW6020	04/03/13 15:31	PER	7440-39-3	
Boron, Dissolved	0.31	mg/L	0.04	SW6020	04/03/13 14:25	PER	7440-42-8	
Boron	0.31	mg/L	0.04	SW6020	04/03/13 15:31	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/03/13 14:25	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/03/13 15:31	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/03/13 14:25	PER	7440-47-3	
Chromium	0.048	mg/L	0.010	SW6020	04/03/13 15:31	PER	7440-47-3	
Cobalt, Dissolved	0.012	mg/L	0.010	SW6020	04/03/13 14:25	PER	7440-48-4	
Cobalt	0.028	mg/L	0.010	SW6020	04/03/13 15:31	PER	7440-48-4	
Copper, Dissolved	0.017	mg/L	0.002	SW6020	04/03/13 14:25	PER	7440-50-8	
Copper	0.041	mg/L	0.002	SW6020	04/03/13 15:31	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:25	PER	7439-92-1	
Lead	0.019	mg/L	0.002	SW6020	04/03/13 15:31	PER	7439-92-1	
Manganese, Dissolved	1.44	mg/L	0.010	SW6020	04/03/13 14:25	PER	7439-96-5	
Manganese	5.67	mg/L	0.010	SW6020	04/03/13 15:31	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/03/13 16:09	CCM	7439-97-6	
Mercury	0.0003	mg/L	0.0001	SW7471A	04/03/13 16:07	CCM	7439-97-6	
Nickel, Dissolved	0.114	mg/L	0.010	SW6020	04/03/13 14:25	PER	7440-02-0	
Nickel	0.207	mg/L	0.010	SW6020	04/03/13 15:31	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:25	PER	7782-49-2	
Selenium	0.005	mg/L	0.002	SW6020	04/03/13 15:31	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/03/13 14:25	PER	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	04/03/13 15:31	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:25	PER	7440-62-2	
Vanadium	0.024	mg/L	0.002	SW6020	04/03/13 15:31	PER	7440-62-2	
Zinc, Dissolved	0.213	mg/L	0.010	SW6020	04/03/13 14:25	PER	7440-66-6	
Zinc	1.41	mg/L	0.010	SW6020	04/03/13 15:31	PER	7440-66-6	

Lab Sample ID: S55939.01 (continued)
Sample Tag: MW-13-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	14	ug/L	5	SW8260B - SIM	04/03/13 14:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	76-13-1	
Acetone	20	ug/L	10	SW8260B	04/03/13 21:54	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/03/13 21:54	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/03/13 21:54	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/03/13 21:54	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/03/13 21:54	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	10061-01-5	
Toluene	2	ug/L	1	SW8260B	04/03/13 21:54	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/03/13 21:54	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	120-82-1	

Lab Sample ID: S55939.01 (continued)
Sample Tag: MW-13-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/03/13 21:54	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S55939.02
Sample Tag: MW-13-25_85-90
Collected Date/Time: 04/02/2013 14:30
Matrix: Water
COC Reference: 81210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	125ml Plastic	HNO3	Yes	4.5	IR
1	1L Amber	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/02/13 16:26	PL		
Mercury Digestion	Completed			SW7471A	04/03/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	04/03/13 11:30	CCM		
Metal Digestion	Completed			3015A	04/03/13 09:00	PER		
Metal Digestion	Completed			3015A	04/03/13 09:00	PER		
pH check for VOCs	>2	STD Units		N/A	04/04/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:27	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	04/03/13 15:38	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020	04/03/13 14:27	PER	7440-38-2	
Arsenic	0.019	mg/L	0.002	SW6020	04/03/13 15:38	PER	7440-38-2	
Barium, Dissolved	0.152	mg/L	0.010	SW6020	04/03/13 14:27	PER	7440-39-3	
Barium	0.252	mg/L	0.010	SW6020	04/03/13 15:38	PER	7440-39-3	
Boron, Dissolved	0.10	mg/L	0.04	SW6020	04/03/13 14:27	PER	7440-42-8	
Boron	0.12	mg/L	0.04	SW6020	04/03/13 15:38	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/03/13 14:27	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/03/13 15:38	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/03/13 14:27	PER	7440-47-3	
Chromium	0.046	mg/L	0.010	SW6020	04/03/13 15:38	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/03/13 14:27	PER	7440-48-4	
Cobalt	0.018	mg/L	0.010	SW6020	04/03/13 15:38	PER	7440-48-4	
Copper, Dissolved	0.006	mg/L	0.002	SW6020	04/03/13 14:27	PER	7440-50-8	
Copper	0.010	mg/L	0.002	SW6020	04/03/13 15:38	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:27	PER	7439-92-1	
Lead	0.021	mg/L	0.002	SW6020	04/03/13 15:38	PER	7439-92-1	
Manganese, Dissolved	0.683	mg/L	0.010	SW6020	04/03/13 14:27	PER	7439-96-5	
Manganese	4.54	mg/L	0.010	SW6020	04/03/13 15:38	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/03/13 16:13	CCM	7439-97-6	
Mercury	0.0004	mg/L	0.0001	SW7471A	04/03/13 16:11	CCM	7439-97-6	
Nickel, Dissolved	0.027	mg/L	0.010	SW6020	04/03/13 14:27	PER	7440-02-0	
Nickel	0.105	mg/L	0.010	SW6020	04/03/13 15:38	PER	7440-02-0	
Selenium, Dissolved	0.003	mg/L	0.002	SW6020	04/03/13 14:27	PER	7782-49-2	
Selenium	0.008	mg/L	0.002	SW6020	04/03/13 15:38	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/03/13 14:27	PER	7440-22-4	
Silver	0.0002	mg/L	0.0002	SW6020	04/03/13 15:38	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/03/13 14:27	PER	7440-62-2	
Vanadium	0.017	mg/L	0.002	SW6020	04/03/13 15:38	PER	7440-62-2	
Zinc, Dissolved	8.48	mg/L	0.010	SW6020	04/03/13 14:27	PER	7440-66-6	
Zinc	22.8	mg/L	0.010	SW6020	04/03/13 15:38	PER	7440-66-6	

Lab Sample ID: S55939.02 (continued)
Sample Tag: MW-13-25_85-90

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics, Dissolved								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	04/03/13 17:43	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	SW8270C	04/03/13 17:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	7005-72-3	
Caprolactam	13	ug/L	1	SW8270C	04/03/13 17:43	PL	105-60-2	B
Carbazole	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	04/03/13 17:43	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	SW8270C	04/03/13 17:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	2	SW8270C	04/03/13 17:43	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S55939.02 (continued)
Sample Tag: MW-13-25_85-90

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics, Dissolved (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/03/13 17:43	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/03/13 14:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/03/13 22:15	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/03/13 22:15	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/03/13 22:15	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/03/13 22:15	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/03/13 22:15	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	108-87-2	

Lab Sample ID: S55939.02 (continued)
Sample Tag: MW-13-25_85-90

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	10061-01-5	
Toluene	1	ug/L	1	SW8260B	04/03/13 22:15	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/03/13 22:15	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/03/13 22:15	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S55939.03
Sample Tag: MW-13-22
Collected Date/Time: 04/02/2013 15:00
Matrix: Water
COC Reference: 81210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	04/04/13 10:40	WAT		
Organics - Volatiles								
1,4-Dioxane	52	ug/L	5	SW8260B - SIM	04/03/13 15:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/03/13 22:36	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/03/13 22:36	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/03/13 22:36	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/03/13 22:36	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/03/13 22:36	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	79-34-5	

Lab Sample ID: S55939.03 (continued)
Sample Tag: MW-13-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/03/13 22:36	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/03/13 22:36	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

81210

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.225.1940 FAX NO.: 810.229.8944 P.O. NO.:
E-MAIL ADDRESS: B0064480.2013.00106 QUOTE NO.:
PROJECT NO./NAME: Randy.Christensen@arcadis-us.com SAMPLER(S) - PLEASE PRINT/SIGN NAME: C. Baton

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4 Dioxane (8260 SIMS)	Metals - Total	Metals - Dissolved	SVOCs	Special Instructions
55939.01	4-2-13	1345	MW-13-23	W	5		3	2					✓	✓	✓		All dissolved metals & SVOCs were field filtered
.02	4-2-13	1430	MW-13-25-85-90	W	6	1	3	2					✓	✓	✓	✓	
.03	4-2-13	1500	MW-13-22	W	3		3						✓				

RELINQUISHED BY: SIGNATURE/ORGANIZATION: CBA/Arcadis ☒ Sampler DATE: 4-2-13 TIME: 1615
RECEIVED BY: SIGNATURE/ORGANIZATION: Mer 4-2-13 DATE: 4-2-13 TIME: 1615

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Mer DATE: 4-2-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faivet DATE: 4-2-13 TIME: 1535

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S55960.01(01)
Generated on 04/08/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55960.01-S55960.03
Project: B0064480.2013.00106
Collected Date: 04/03/2013
Submitted Date/Time: 04/04/2013 08:00
Sampled by: Colleen Barton
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55960.01	MW-13-26_103-108	Water	04/03/2013 14:30
S55960.02	MW-13-24	Water	04/03/2013 15:00
S55960.03	MW-13-25	Water	04/03/2013 16:20

Analytical Laboratory Report

Lab Sample ID: S55960.01
Sample Tag: MW-13-26_103-108
Collected Date/Time: 04/03/2013 14:30
Matrix: Water
COC Reference: 81211

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR
1	1L Amber	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/04/13 15:25	PL		
Mercury Digestion	Completed			SW7471A	04/04/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	04/04/13 11:30	CCM		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/05/13 10:25	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:38	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	04/06/13 12:30	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020	04/06/13 12:38	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020	04/06/13 12:30	PER	7440-38-2	
Barium, Dissolved	0.099	mg/L	0.010	SW6020	04/06/13 12:38	PER	7440-39-3	
Barium	0.117	mg/L	0.010	SW6020	04/06/13 12:30	PER	7440-39-3	
Boron, Dissolved	0.21	mg/L	0.04	SW6020	04/06/13 12:38	PER	7440-42-8	
Boron	0.22	mg/L	0.04	SW6020	04/06/13 12:30	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/06/13 12:38	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/06/13 12:30	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	04/06/13 12:38	PER	7440-47-3	
Chromium	0.024	mg/L	0.005	SW6020	04/06/13 12:30	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/06/13 12:38	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	04/06/13 12:30	PER	7440-48-4	
Copper, Dissolved	0.005	mg/L	0.002	SW6020	04/06/13 12:38	PER	7440-50-8	
Copper	0.009	mg/L	0.002	SW6020	04/06/13 12:30	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:38	PER	7439-92-1	
Lead	0.013	mg/L	0.002	SW6020	04/06/13 12:30	PER	7439-92-1	
Manganese, Dissolved	0.454	mg/L	0.010	SW6020	04/06/13 12:38	PER	7439-96-5	
Manganese	1.27	mg/L	0.010	SW6020	04/06/13 12:30	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/04/13 15:18	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	04/04/13 15:16	CCM	7439-97-6	
Nickel, Dissolved	0.015	mg/L	0.010	SW6020	04/06/13 12:38	PER	7440-02-0	
Nickel	0.024	mg/L	0.010	SW6020	04/06/13 12:30	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:38	PER	7782-49-2	
Selenium	0.003	mg/L	0.002	SW6020	04/06/13 12:30	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/06/13 12:38	PER	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	04/06/13 12:30	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:38	PER	7440-62-2	
Vanadium	0.007	mg/L	0.002	SW6020	04/06/13 12:30	PER	7440-62-2	
Zinc, Dissolved	4.05	mg/L	0.010	SW6020	04/06/13 12:38	PER	7440-66-6	
Zinc	7.60	mg/L	0.050	SW6020	04/06/13 12:32	PER	7440-66-6	

Lab Sample ID: S55960.01 (continued)
Sample Tag: MW-13-26_103-108

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics, Dissolved								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	04/05/13 14:47	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	SW8270C	04/05/13 14:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	7005-72-3	
Caprolactam	3	ug/L	1	SW8270C	04/05/13 14:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	04/05/13 14:47	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	SW8270C	04/05/13 14:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	SW8270C	04/05/13 14:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S55960.01 (continued)
Sample Tag: MW-13-26_103-108

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics, Dissolved (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 14:47	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/04/13 14:51	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/04/13 14:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/04/13 14:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/04/13 14:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/04/13 14:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/04/13 14:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	108-87-2	

Lab Sample ID: S55960.01 (continued)
Sample Tag: MW-13-26_103-108

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/04/13 14:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/04/13 14:48	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S55960.02
Sample Tag: MW-13-24
Collected Date/Time: 04/03/2013 15:00
Matrix: Water
COC Reference: 81211

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR
1	1L Amber	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/04/13 15:25	PL		
Mercury Digestion	Completed			SW7471A	04/04/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	04/04/13 11:30	CCM		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/05/13 10:25	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:43	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	04/06/13 12:41	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020	04/06/13 12:43	PER	7440-38-2	
Arsenic	0.011	mg/L	0.002	SW6020	04/06/13 12:41	PER	7440-38-2	
Barium, Dissolved	0.058	mg/L	0.010	SW6020	04/06/13 12:43	PER	7440-39-3	
Barium	0.124	mg/L	0.010	SW6020	04/06/13 12:41	PER	7440-39-3	
Boron, Dissolved	0.11	mg/L	0.04	SW6020	04/06/13 12:43	PER	7440-42-8	
Boron	0.12	mg/L	0.04	SW6020	04/06/13 12:41	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/06/13 12:43	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/06/13 12:41	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	04/06/13 12:43	PER	7440-47-3	
Chromium	0.032	mg/L	0.005	SW6020	04/06/13 12:41	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/06/13 12:43	PER	7440-48-4	
Cobalt	0.018	mg/L	0.010	SW6020	04/06/13 12:41	PER	7440-48-4	
Copper, Dissolved	0.003	mg/L	0.002	SW6020	04/06/13 12:43	PER	7440-50-8	
Copper	0.036	mg/L	0.002	SW6020	04/06/13 12:41	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:43	PER	7439-92-1	
Lead	0.028	mg/L	0.002	SW6020	04/06/13 12:41	PER	7439-92-1	
Manganese, Dissolved	0.994	mg/L	0.010	SW6020	04/06/13 12:43	PER	7439-96-5	
Manganese	4.91	mg/L	0.010	SW6020	04/06/13 12:41	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/04/13 15:22	CCM	7439-97-6	
Mercury	0.0003	mg/L	0.0001	SW7471A	04/04/13 15:20	CCM	7439-97-6	
Nickel, Dissolved	0.094	mg/L	0.010	SW6020	04/06/13 12:43	PER	7440-02-0	
Nickel	0.161	mg/L	0.010	SW6020	04/06/13 12:41	PER	7440-02-0	
Selenium, Dissolved	0.003	mg/L	0.002	SW6020	04/06/13 12:43	PER	7782-49-2	
Selenium	0.005	mg/L	0.002	SW6020	04/06/13 12:41	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/06/13 12:43	PER	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	04/06/13 12:41	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:43	PER	7440-62-2	
Vanadium	0.020	mg/L	0.002	SW6020	04/06/13 12:41	PER	7440-62-2	
Zinc, Dissolved	0.491	mg/L	0.010	SW6020	04/06/13 12:43	PER	7440-66-6	
Zinc	1.60	mg/L	0.010	SW6020	04/06/13 12:41	PER	7440-66-6	

Lab Sample ID: S55960.02 (continued)
Sample Tag: MW-13-24

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics, Dissolved								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	04/05/13 15:20	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	SW8270C	04/05/13 15:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	7005-72-3	
Caprolactam	4	ug/L	1	SW8270C	04/05/13 15:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	04/05/13 15:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	SW8270C	04/05/13 15:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	SW8270C	04/05/13 15:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S55960.02 (continued)
Sample Tag: MW-13-24

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics, Dissolved (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:20	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/04/13 15:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/04/13 15:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/04/13 15:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/04/13 15:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/04/13 15:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/04/13 15:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	108-87-2	

Lab Sample ID: S55960.02 (continued)
Sample Tag: MW-13-24

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	10061-01-5	
Toluene	2	ug/L	1	SW8260B	04/04/13 15:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/04/13 15:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/04/13 15:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S55960.03
Sample Tag: MW-13-25
Collected Date/Time: 04/03/2013 16:20
Matrix: Water
COC Reference: 81211

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/04/13 15:25	PL		
Mercury Digestion	Completed			SW7471A	04/05/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	04/04/13 11:30	CCM		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/05/13 10:25	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:47	PER	7440-36-0	1
Antimony	Not detected	mg/L	0.002	SW6020	04/06/13 12:45	PER	7440-36-0	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020	04/06/13 12:47	PER	7440-38-2	1
Arsenic	0.006	mg/L	0.002	SW6020	04/06/13 12:45	PER	7440-38-2	
Barium, Dissolved	0.126	mg/L	0.010	SW6020	04/06/13 12:47	PER	7440-39-3	1
Barium	0.124	mg/L	0.010	SW6020	04/06/13 12:45	PER	7440-39-3	
Boron, Dissolved	0.09	mg/L	0.04	SW6020	04/06/13 12:47	PER	7440-42-8	1
Boron	0.09	mg/L	0.04	SW6020	04/06/13 12:45	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/06/13 12:47	PER	7440-43-9	1
Cadmium	Not detected	mg/L	0.0010	SW6020	04/06/13 12:45	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	04/06/13 12:47	PER	7440-47-3	1
Chromium	0.008	mg/L	0.005	SW6020	04/06/13 12:45	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/06/13 12:47	PER	7440-48-4	1
Cobalt	Not detected	mg/L	0.010	SW6020	04/06/13 12:45	PER	7440-48-4	
Copper, Dissolved	0.003	mg/L	0.002	SW6020	04/06/13 12:47	PER	7440-50-8	1
Copper	0.012	mg/L	0.002	SW6020	04/06/13 12:45	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:47	PER	7439-92-1	1
Lead	0.003	mg/L	0.002	SW6020	04/06/13 12:45	PER	7439-92-1	
Manganese, Dissolved	0.948	mg/L	0.010	SW6020	04/06/13 12:47	PER	7439-96-5	1
Manganese	1.21	mg/L	0.010	SW6020	04/06/13 12:45	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/05/13 15:41	CCM	7439-97-6	1
Mercury	Not detected	mg/L	0.0001	SW7471A	04/04/13 15:24	CCM	7439-97-6	
Nickel, Dissolved	0.035	mg/L	0.010	SW6020	04/06/13 12:47	PER	7440-02-0	1
Nickel	0.041	mg/L	0.010	SW6020	04/06/13 12:45	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:47	PER	7782-49-2	1
Selenium	0.002	mg/L	0.002	SW6020	04/06/13 12:45	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/06/13 12:47	PER	7440-22-4	1
Silver	Not detected	mg/L	0.0002	SW6020	04/06/13 12:45	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:47	PER	7440-62-2	1
Vanadium	0.004	mg/L	0.002	SW6020	04/06/13 12:45	PER	7440-62-2	
Zinc, Dissolved	0.042	mg/L	0.010	SW6020	04/06/13 12:47	PER	7440-66-6	1
Zinc	0.097	mg/L	0.010	SW6020	04/06/13 12:45	PER	7440-66-6	

1-*Filtered in lab

Lab Sample ID: S55960.03 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	101-55-3	
di-n-Butyl phthalate	4	ug/L	1	SW8270C	04/05/13 15:54	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/05/13 15:54	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	132-64-9	
Diethyl phthalate	2	ug/L	1	SW8270C	04/05/13 15:54	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	3	ug/L	1	SW8270C	04/05/13 15:54	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S55960.03 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 15:54	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/04/13 15:35	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	76-13-1	
Acetone	11	ug/L	10	SW8260B	04/04/13 15:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/04/13 15:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/04/13 15:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/04/13 15:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/04/13 15:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	108-87-2	

Lab Sample ID: S55960.03 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/04/13 15:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/04/13 15:30	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

81211

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.225.1940 FAX NO.: 810.229.8940 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B006480.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Colleen Barton

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4-Dioxane (8260 SIMS)	SVOCs	Dissolved Metals	Total Metals	Special Instructions
55960.01	4-3-13	1430	MW-13-26_103-108	W	6	1	3	2					✓	✓	✓	✓	SVOCs & Dissolved Metals Field Filtered
.02	4-3-13	1500	MW-13-24	W	6	1	3	2					✓	✓	✓	✓	" "
.03	4-3-13	1620	MW-13-25	W	6	2	3	1					✓	✓	✓	✓	* SVOCs & Dissolved Metals need to be Lab Filtered *

RELINQUISHED BY: SIGNATURE/ORGANIZATION: CB BT/Arcadis ☒ Sampler DATE: 4-3-13 TIME: 1800
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faunt DATE: 4-4-13 TIME: 800

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56086.01(01)
Generated on 04/17/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56086.01
Project: B0064480.2013.00106
Collected Date: 04/15/2013
Submitted Date/Time: 04/16/2013 08:00
Sampled by: C. Barton
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56086.01	MW-13-27_77-80	Water	04/15/2013 16:30

Analytical Laboratory Report

Lab Sample ID: S56086.01
Sample Tag: MW-13-27_77-80
Collected Date/Time: 04/15/2013 16:30
Matrix: Water
COC Reference: 81489

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	04/16/13 08:30	CCM		
Metal Digestion	Completed			3015A	04/16/13 09:00	PER		
pH check for VOCs	>2	STD Units		N/A	04/17/13 10:26	JGH		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	04/16/13 16:11	PER	7440-36-0	
Arsenic	0.064	mg/L	0.002	SW6020	04/16/13 16:11	PER	7440-38-2	
Barium	0.444	mg/L	0.010	SW6020	04/16/13 16:11	PER	7440-39-3	
Boron	0.17	mg/L	0.04	SW6020	04/16/13 16:11	PER	7440-42-8	
Cadmium	0.0029	mg/L	0.0010	SW6020	04/16/13 16:11	PER	7440-43-9	
Chromium	0.103	mg/L	0.010	SW6020	04/16/13 16:11	PER	7440-47-3	
Cobalt	0.062	mg/L	0.010	SW6020	04/16/13 16:11	PER	7440-48-4	
Copper	0.007	mg/L	0.002	SW6020	04/16/13 16:11	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	04/16/13 16:11	PER	7439-92-1	
Manganese	19.9	mg/L	0.010	SW6020	04/16/13 16:11	PER	7439-96-5	
Mercury	0.0012	mg/L	0.0001	SW7471A	04/16/13 14:35	CCM	7439-97-6	
Nickel	0.486	mg/L	0.010	SW6020	04/16/13 16:11	PER	7440-02-0	
Selenium	0.015	mg/L	0.002	SW6020	04/16/13 16:11	PER	7782-49-2	
Silver	Not detected	mg/L	0.0002	SW6020	04/16/13 16:11	PER	7440-22-4	
Vanadium	0.023	mg/L	0.002	SW6020	04/16/13 16:11	PER	7440-62-2	
Zinc	28.5	mg/L	0.010	SW6020	04/16/13 16:11	PER	7440-66-6	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/17/13 13:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	76-13-1	
Acetone	10	ug/L	10	SW8260B	04/16/13 18:21	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/16/13 18:21	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/16/13 18:21	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-34-3	

Lab Sample ID: S56086.01 (continued)
Sample Tag: MW-13-27_77-80

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/16/13 18:21	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/16/13 18:21	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/16/13 18:21	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/16/13 18:21	JGH	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

81489

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Ste 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.229.1940 FAX NO.: 810.229.8594 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B006480.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: C. Barlow

TURNAROUND TIME REQUIRED ☒ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4-Dioxane (SIM SW8260C)	Dissolved metals	Total metals	Special Instructions
560860.01	4-15-13	1630	MW-13-27-77-80	W	5		3	2					✓	✓	✓	Dissolved metals must be LAB filtered

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	☒ Sampler / Arcadis	4-15-13	1730
RECEIVED BY: SIGNATURE/ORGANIZATION	Eugene Berezovsky	04.15.13	17:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	4/16/13	800

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56157.01(01)
Generated on 04/23/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56157.01
Project: B0064480.2013.00106
Collected Date: 04/19/2013
Submitted Date/Time: 04/19/2013 13:30
Sampled by: C. Barton
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56157.01	MW-13-27_77-80	Water	04/19/2013 12:45

Analytical Laboratory Report

Lab Sample ID: S56157.01
Sample Tag: MW-13-27_77-80
Collected Date/Time: 04/19/2013 12:45
Matrix: Water
COC Reference: 81212

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	04/22/13 10:00	CCM		
Metal Digestion	Completed			3015A	04/23/13 09:00	PER		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/23/13 12:35	PER	7440-36-0	1
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020	04/23/13 12:35	PER	7440-38-2	1
Barium, Dissolved	0.038	mg/L	0.010	SW6020	04/23/13 12:35	PER	7440-39-3	1
Boron, Dissolved	0.12	mg/L	0.04	SW6020	04/23/13 12:35	PER	7440-42-8	1
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/23/13 12:35	PER	7440-43-9	1
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/23/13 12:35	PER	7440-47-3	1
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/23/13 12:35	PER	7440-48-4	1
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	04/23/13 12:35	PER	7440-50-8	1
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/23/13 12:35	PER	7439-92-1	1
Manganese, Dissolved	1.90	mg/L	0.010	SW6020	04/23/13 12:35	PER	7439-96-5	1
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/22/13 15:53	CCM	7439-97-6	1
Nickel, Dissolved	0.036	mg/L	0.010	SW6020	04/23/13 12:35	PER	7440-02-0	1
Selenium, Dissolved	0.003	mg/L	0.002	SW6020	04/23/13 12:35	PER	7782-49-2	1
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/23/13 12:35	PER	7440-22-4	1
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/23/13 12:35	PER	7440-62-2	1
Zinc, Dissolved	0.115	mg/L	0.010	SW6020	04/23/13 12:35	PER	7440-66-6	1

1-*Filtered and Preserved in Lab

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C.O.C. PAGE # 1 OF 1

81212

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Ste 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.225.1940 FAX NO.: 810.229.8594 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.201300106
SAMPLER(S) - PLEASE PRINT & SIGN NAME: C. Barton

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☒ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Dissolved Metals	Special Instructions
56157.01	4-19-13	1245	MW-13-27_77-80	W	1	1							✓	Sample needs to be LAB Filtered

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] ☒ Sampler / Arcadis DATE: 4-19-13 TIME: 13:20
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] MQA DATE: 4-19-13 TIME: 13:20

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] Merit DATE: 4-19-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 4-19-13 TIME: 1330

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56206.01(01)
Generated on 04/26/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56206.01-S56206.02
Project: B0064480.2013.00106
Collected Date: 04/23/2013 - 04/24/2013
Submitted Date/Time: 04/24/2013 15:25
Sampled by: Unknown
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56206.01	MW-13-29_76-80	Groundwater	04/23/2013 17:05
S56206.02	Trip Blank	Water	04/24/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56206.01
Sample Tag: MW-13-29_76-80
Collected Date/Time: 04/23/2013 17:05
Matrix: Groundwater
COC Reference: 81478

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR
2	1L Amber	None	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/24/13 19:45	EMR		
Mercury Digestion	Completed			SW7471A	04/25/13 09:30	CCM		
Mercury Digestion	Completed			SW7471A	04/25/13 09:30	CCM		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/25/13 10:48	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:26	PER	0.000085	
Antimony	Not detected	mg/L	0.002	SW6020	04/25/13 15:44	PER	0.000085	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:26	PER	0.00043	
Arsenic	0.007	mg/L	0.002	SW6020	04/25/13 15:44	PER	0.00043	
Barium, Dissolved	0.041	mg/L	0.010	SW6020	04/25/13 18:26	PER	0.00078	
Barium	0.094	mg/L	0.010	SW6020	04/25/13 15:44	PER	0.00078	
Boron, Dissolved	0.20	mg/L	0.04	SW6020	04/25/13 18:26	PER	0.0016	
Boron	0.19	mg/L	0.04	SW6020	04/25/13 15:44	PER	0.0016	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/25/13 18:26	PER	0.00015	
Cadmium	0.0006	mg/L	0.0010	SW6020	04/25/13 15:44	PER	0.00015	b
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:26	PER	0.00021	
Chromium	0.040	mg/L	0.010	SW6020	04/25/13 15:44	PER	0.00021	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:26	PER	0.000070	
Cobalt	0.008	mg/L	0.010	SW6020	04/25/13 15:44	PER	0.000070	b
Copper, Dissolved	0.003	mg/L	0.002	SW6020	04/25/13 18:26	PER	0.00019	
Copper	0.024	mg/L	0.002	SW6020	04/25/13 15:44	PER	0.00019	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:26	PER	0.000090	
Lead	0.018	mg/L	0.002	SW6020	04/25/13 15:44	PER	0.000090	
Manganese, Dissolved	1.04	mg/L	0.010	SW6020	04/25/13 18:26	PER	0.00026	
Manganese	1.80	mg/L	0.010	SW6020	04/25/13 15:44	PER	0.00026	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/25/13 15:04	CCM	0.000008	
Mercury	Not detected	mg/L	0.0001	SW7471A	04/25/13 15:02	CCM	0.000008	
Nickel, Dissolved	0.044	mg/L	0.010	SW6020	04/25/13 18:26	PER	0.00022	
Nickel	0.047	mg/L	0.010	SW6020	04/25/13 15:44	PER	0.00022	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	04/25/13 18:26	PER	0.0024	
Selenium	Not detected	mg/L	0.005	SW6020	04/25/13 15:44	PER	0.0024	
Silver, Dissolved	0.0010	mg/L	0.0005	SW6020	04/25/13 18:26	PER	0.000070	
Silver	0.0014	mg/L	0.0005	SW6020	04/25/13 15:44	PER	0.000070	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:26	PER	0.000075	
Vanadium	0.007	mg/L	0.002	SW6020	04/25/13 15:44	PER	0.000075	
Zinc, Dissolved	6.71	mg/L	0.010	SW6020	04/25/13 18:26	PER	0.00064	
Zinc	11.7	mg/L	0.010	SW6020	04/25/13 15:44	PER	0.00064	

b-Value detected less than reporting limit, but greater than MDL

Lab Sample ID: S56206.01 (continued)
Sample Tag: MW-13-29_76-80

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Acetophenone	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	400	
Anthracene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Atrazine	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	300	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	2.7	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	400	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Caprolactam	1	ug/L	1	SW8270C	04/26/13 03:57	PL	30	
Carbazole	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Chrysene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/26/13 03:57	PL	500	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	500	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	04/26/13 03:57	PL	300	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Fluorene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	0.055	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	0.053	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
Isophorone	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	0.028	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	

Lab Sample ID: S56206.01 (continued)
Sample Tag: MW-13-29_76-80

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Naphthalene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	0.016	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	300	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	200	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Phenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Pyrene	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:57	PL	100	
Organics - Volatiles								
1,4-Dioxane	130	ug/L	5	SW8260B - SIM	04/24/13 16:47	WAT	0.97	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.15	
Acetone	Not detected	ug/L	10	SW8260B	04/24/13 15:46	WAT	3.0	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.028	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/24/13 15:46	WAT	0.15	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.039	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/24/13 15:46	WAT	2.0	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.058	
Chloromethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.072	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.066	
Bromomethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.13	
Chloroethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.11	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.13	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.055	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.072	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.041	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.045	
Chloroform	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.032	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.10	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.11	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/24/13 15:46	WAT	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/24/13 15:46	WAT	0.30	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.025	
Benzene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.014	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.039	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.045	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.025	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.070	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.019	

Lab Sample ID: S56206.01 (continued)
Sample Tag: MW-13-29_76-80

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Toluene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.17	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.027	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.039	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.19	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.031	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.032	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.067	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.011	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/24/13 15:46	WAT	0.025	
o-Xylene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.016	
Styrene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.016	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.014	
Bromoform	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.035	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.027	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.036	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.053	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.016	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.045	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/24/13 15:46	WAT	0.12	

Analytical Laboratory Report

Lab Sample ID: S56206.02
Sample Tag: Trip Blank
Collected Date/Time: 04/24/2013 00:01
Matrix: Water
COC Reference: 81478

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	04/25/13 10:53	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/24/13 17:09	WAT	0.97	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.15	
Acetone	Not detected	ug/L	10	SW8260B	04/24/13 16:06	WAT	3.0	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.028	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/24/13 16:06	WAT	0.15	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.039	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/24/13 16:06	WAT	2.0	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.058	
Chloromethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.072	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.066	
Bromomethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.13	
Chloroethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.11	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.13	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.055	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.072	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.041	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.045	
Chloroform	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.032	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.10	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.11	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/24/13 16:06	WAT	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/24/13 16:06	WAT	0.30	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.025	
Benzene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.014	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.039	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.045	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.025	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.070	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.019	
Toluene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.17	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.027	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.039	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.19	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.031	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.032	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.067	

Lab Sample ID: S56206.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.011	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/24/13 16:06	WAT	0.025	
o-Xylene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.016	
Styrene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.016	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.014	
Bromoform	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.035	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.027	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.036	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.053	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.016	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.045	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/24/13 16:06	WAT	0.12	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

81478

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr. Ste. 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.: 810-229-8594 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: B006448O. 2013. 00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4-dioxane	Dissolved metals	Total metals	SVOCs							
562206.01	4/23/13	1705	MW-13-29-76-80	GW	6	2	3	1					3	1	1	1							Please filter sample provided for dissolved metal
.02	4/24/13	—	Trip Blank	W	2		2																

RELINQUISHED BY: SIGNATURE/ORGANIZATION [signature] /ARCADIS ☒ Sampler DATE 4/24/13 TIME 1500
RECEIVED BY: SIGNATURE/ORGANIZATION [signature] MSW DATE 4-24-13 TIME 1500

RELINQUISHED BY: SIGNATURE/ORGANIZATION [signature] MSW DATE 4-24-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tabatha Faust DATE 4-24-13 TIME 1525

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Supplemental Report

Report ID: S56188.01(02)
Generated on 04/26/2013
Replaces report S56188.01(01) generated on 04/25/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56188.01-S56188.03
Project: B0064480.2013.00106
Collected Date: 04/22/2013 - 04/23/2013
Submitted Date/Time: 04/23/2013 16:00
Sampled by: Austin Westhmis
P.O. #: B0064480.2013.0

Final Results for all analysis

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56188.01	Drilling Water	Water	04/22/2013 10:30
S56188.02	FB-1(042213)	Water	04/22/2013 10:40
S56188.03	MW-13-28(042313)	Groundwater	04/23/2013 15:15

Lab Sample ID: S56188.01
Sample Tag: Drilling Water
Collected Date/Time: 04/22/2013 10:30
Matrix: Water
COC Reference: 81477

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
1	1L Amber	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/23/13 23:39	EMR		
pH check for VOCs	<2	STD Units		N/A	04/25/13 10:48	WAT		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	101-55-3	
di-n-Butyl phthalate	3	ug/L	1	SW8270C	04/26/13 02:14	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/26/13 02:14	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	131-11-3	

B-Compound also found in associated method blank

Lab Sample ID: S56188.01 (continued)
Sample Tag: Drilling Water

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	04/26/13 02:14	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:14	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/24/13 15:41	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/24/13 13:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/24/13 13:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/24/13 13:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	156-59-2	

Lab Sample ID: S56188.01 (continued)
Sample Tag: Drilling Water

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloroform	2	ug/L	1	SW8260B	04/24/13 13:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/24/13 13:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/24/13 13:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/24/13 13:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/24/13 13:43	WAT	96-12-8	

Lab Sample ID: S56188.02
Sample Tag: FB-1(042213)
Collected Date/Time: 04/22/2013 10:40
Matrix: Water
COC Reference: 81477

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
1	1L Amber	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/23/13 23:39	EMR		
pH check for VOCs	<2	STD Units		N/A	04/25/13 10:48	WAT		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	04/26/13 02:49	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/26/13 02:49	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	131-11-3	

B-Compound also found in associated method blank

Lab Sample ID: S56188.02 (continued)
Sample Tag: FB-1(042213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 02:49	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/24/13 16:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/24/13 14:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/24/13 14:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/24/13 14:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	156-59-2	

Lab Sample ID: S56188.02 (continued)
Sample Tag: FB-1(042213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloroform	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/24/13 14:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/24/13 14:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/24/13 14:04	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/24/13 14:04	WAT	96-12-8	

Lab Sample ID: S56188.03
Sample Tag: MW-13-28(042313)
Collected Date/Time: 04/23/2013 15:15
Matrix: Groundwater
COC Reference: 81477

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
1	1L Amber	None	Yes	4.7	IR
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/23/13 23:39	EMR		
Mercury Digestion	Completed			SW7471A	04/24/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	04/24/13 11:45	CCM		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/25/13 10:48	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:20	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	04/25/13 15:38	PER	7440-36-0	
Arsenic, Dissolved	0.020	mg/L	0.002	SW6020	04/25/13 18:20	PER	7440-38-2	
Arsenic	0.021	mg/L	0.002	SW6020	04/25/13 15:38	PER	7440-38-2	
Barium, Dissolved	0.077	mg/L	0.010	SW6020	04/25/13 18:20	PER	7440-39-3	
Barium	0.088	mg/L	0.010	SW6020	04/25/13 15:38	PER	7440-39-3	
Boron, Dissolved	0.15	mg/L	0.04	SW6020	04/25/13 18:20	PER	7440-42-8	
Boron	0.15	mg/L	0.04	SW6020	04/25/13 15:38	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/25/13 18:20	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/25/13 15:38	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:20	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	04/25/13 15:38	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:20	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	04/25/13 15:38	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:20	PER	7440-50-8	
Copper	0.002	mg/L	0.002	SW6020	04/25/13 15:38	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:20	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	04/25/13 15:38	PER	7439-92-1	
Manganese, Dissolved	0.046	mg/L	0.010	SW6020	04/25/13 18:20	PER	7439-96-5	
Manganese	0.045	mg/L	0.010	SW6020	04/25/13 15:38	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/24/13 15:22	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	04/24/13 15:20	CCM	7439-97-6	
Nickel, Dissolved	0.023	mg/L	0.010	SW6020	04/25/13 18:20	PER	7440-02-0	
Nickel	0.021	mg/L	0.010	SW6020	04/25/13 15:38	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	04/25/13 18:20	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	04/25/13 15:38	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	04/25/13 18:20	PER	7440-22-4	
Silver	0.0007	mg/L	0.0005	SW6020	04/25/13 15:38	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:20	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	04/25/13 15:38	PER	7440-62-2	
Zinc, Dissolved	0.017	mg/L	0.010	SW6020	04/25/13 18:20	PER	7440-66-6	
Zinc	0.019	mg/L	0.010	SW6020	04/25/13 15:38	PER	7440-66-6	

Lab Sample ID: S56188.03 (continued)
Sample Tag: MW-13-28(042313)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	04/26/13 03:22	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/26/13 03:22	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	04/26/13 03:22	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S56188.03 (continued)
Sample Tag: MW-13-28(042313)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 03:22	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/24/13 16:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/24/13 14:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/24/13 14:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/24/13 14:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/24/13 14:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/24/13 14:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	108-87-2	

Lab Sample ID: S56188.03 (continued)
Sample Tag: MW-13-28(042313)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/24/13 14:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/24/13 14:24	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

81477

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr. Ste. 100
CITY: Brighton, MI STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.: 810-229-8594 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Austin Westhuis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4-dioxane (SIM 8260)	Dissolved metals	Total Metals	6VOCs
56188.01	4/22/13	1030	Drilling Water	W	4	1	3						3			1
.02	4/22/13	1040	FB1(042213)	W	4	1	3						3			1
.03	4/23/13	1515	MW-13-28(042313)	GW	6	1	3	2					3	1	1	1

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ARCADIS ☒ Sampler DATE: 4/23/13 TIME: 1530
RECEIVED BY: SIGNATURE/ORGANIZATION: Merit DATE: 4-23-13 TIME: 1530

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Merit DATE: 4-23-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Takeda Farat DATE: 4-23-13 TIME: 1800

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL 4.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56208.01(01)
Generated on 04/29/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56208.01-S56208.04
Project: B0064480.2013.00106
Collected Date: 04/24/2013
Submitted Date/Time: 04/25/2013 08:00
Sampled by: Unknown
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56208.01	MW-13-30_79-83	Groundwater	04/24/2013 15:20
S56208.02	MW-13-27(042413)	Groundwater	04/24/2013 16:15
S56208.03	Dup-1	Groundwater	04/24/2013 00:01
S56208.04	Trip Blank	Groundwater	04/24/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56208.01
Sample Tag: MW-13-30_79-83
Collected Date/Time: 04/24/2013 15:20
Matrix: Groundwater
COC Reference: 81479

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/25/13 15:01	PL		
Mercury Digestion	Completed			SW7471A	04/25/13 09:30	CCM		
Mercury Digestion	Completed			SW7471A	04/25/13 09:30	CCM		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/29/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:28	PER	0.000085	1
Antimony	Not detected	mg/L	0.002	SW6020	04/25/13 15:46	PER	0.000085	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020	04/25/13 18:28	PER	0.00043	1
Arsenic	0.037	mg/L	0.002	SW6020	04/25/13 15:46	PER	0.00043	
Barium, Dissolved	0.068	mg/L	0.010	SW6020	04/25/13 18:28	PER	0.00078	1
Barium	0.465	mg/L	0.010	SW6020	04/25/13 15:46	PER	0.00078	
Boron, Dissolved	0.24	mg/L	0.04	SW6020	04/25/13 18:28	PER	0.0016	1
Boron	0.24	mg/L	0.04	SW6020	04/25/13 15:46	PER	0.0016	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/25/13 18:28	PER	0.00015	1
Cadmium	0.0014	mg/L	0.0010	SW6020	04/25/13 15:46	PER	0.00015	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:28	PER	0.00021	1
Chromium	0.008	mg/L	0.010	SW6020	04/25/13 15:46	PER	0.00021	b
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:28	PER	0.000070	1
Cobalt	0.033	mg/L	0.010	SW6020	04/25/13 15:46	PER	0.000070	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:28	PER	0.00019	1
Copper	0.005	mg/L	0.002	SW6020	04/25/13 15:46	PER	0.00019	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:28	PER	0.000090	1
Lead	Not detected	mg/L	0.002	SW6020	04/25/13 15:46	PER	0.000090	
Manganese, Dissolved	1.09	mg/L	0.010	SW6020	04/25/13 18:28	PER	0.00026	1
Manganese	14.0	mg/L	0.010	SW6020	04/25/13 15:46	PER	0.00026	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/25/13 15:18	CCM	0.000008	1
Mercury	0.0014	mg/L	0.0001	SW7471A	04/25/13 15:06	CCM	0.000008	
Nickel, Dissolved	0.025	mg/L	0.010	SW6020	04/25/13 18:28	PER	0.00022	1
Nickel	0.153	mg/L	0.010	SW6020	04/25/13 15:46	PER	0.00022	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	04/25/13 18:28	PER	0.0024	1
Selenium	Not detected	mg/L	0.005	SW6020	04/25/13 15:46	PER	0.0024	
Silver, Dissolved	0.0006	mg/L	0.0005	SW6020	04/25/13 18:28	PER	0.000070	1
Silver	0.0012	mg/L	0.0005	SW6020	04/25/13 15:46	PER	0.000070	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:28	PER	0.000075	1
Vanadium	0.002	mg/L	0.002	SW6020	04/25/13 15:46	PER	0.000075	
Zinc, Dissolved	1.76	mg/L	0.010	SW6020	04/25/13 18:28	PER	0.00064	1

1-*Filtered and preserved in lab
b-Value detected less than reporting limit, but greater than MDL

Lab Sample ID: S56208.01 (continued)
Sample Tag: MW-13-30_79-83

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Metals (continued)								
Zinc	34.7	mg/L	0.010	SW6020	04/25/13 15:46	PER	0.00064	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Acetophenone	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	400	
Anthracene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Atrazine	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	300	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	2.7	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	400	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Caprolactam	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	30	
Carbazole	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Chrysene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Dibenzo(ah)anthracene	Not detected	ug/L	3	SW8270C	04/26/13 04:30	PL	500	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	500	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
bis(2-Ethylhexyl)phthalate	13	ug/L	1	SW8270C	04/26/13 04:30	PL	300	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Fluorene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	0.055	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	0.053	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
Isophorone	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	0.028	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	

Lab Sample ID: S56208.01 (continued)
Sample Tag: MW-13-30_79-83

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Naphthalene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	0.016	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	300	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	200	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Phenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Pyrene	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 04:30	PL	100	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/25/13 14:55	WAT	0.97	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.18	
Acetone	Not detected	ug/L	10	SW8260B	04/26/13 16:45	WAT	0.56	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.24	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/26/13 16:45	WAT	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/26/13 16:45	WAT	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.50	
Chloromethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.31	
Bromomethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.32	
Chloroethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.26	
Chloroform	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.21	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/26/13 16:45	WAT	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/26/13 16:45	WAT	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.20	
Benzene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.20	

Lab Sample ID: S56208.01 (continued)
Sample Tag: MW-13-30_79-83

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.19	
Toluene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.24	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.17	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.18	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.26	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/26/13 16:45	WAT	0.41	
o-Xylene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.25	
Styrene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.25	
Bromoform	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.22	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.19	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.30	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/26/13 16:45	WAT	0.47	

Analytical Laboratory Report

Lab Sample ID: S56208.02
Sample Tag: MW-13-27(042413)
Collected Date/Time: 04/24/2013 16:15
Matrix: Groundwater
COC Reference: 81479

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
1	1L Amber	None	Yes	4.7	IR
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/25/13 15:01	PL		
Mercury Digestion	Completed			SW7471A	04/25/13 09:30	CCM		
Mercury Digestion	Completed			SW7471A	04/25/13 09:30	CCM		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/29/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:36	PER	0.000085	
Antimony	Not detected	mg/L	0.002	SW6020	04/25/13 15:48	PER	0.000085	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020	04/25/13 18:36	PER	0.00043	
Arsenic	0.005	mg/L	0.002	SW6020	04/25/13 15:48	PER	0.00043	
Barium, Dissolved	0.102	mg/L	0.010	SW6020	04/25/13 18:36	PER	0.00078	
Barium	0.105	mg/L	0.010	SW6020	04/25/13 15:48	PER	0.00078	
Boron, Dissolved	0.07	mg/L	0.04	SW6020	04/25/13 18:36	PER	0.0016	
Boron	0.08	mg/L	0.04	SW6020	04/25/13 15:48	PER	0.0016	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/25/13 18:36	PER	0.00015	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/25/13 15:48	PER	0.00015	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:36	PER	0.00021	
Chromium	Not detected	mg/L	0.010	SW6020	04/25/13 15:48	PER	0.00021	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:36	PER	0.000070	
Cobalt	Not detected	mg/L	0.010	SW6020	04/25/13 15:48	PER	0.000070	
Copper, Dissolved	0.002	mg/L	0.002	SW6020	04/25/13 18:36	PER	0.00019	
Copper	0.003	mg/L	0.002	SW6020	04/25/13 15:48	PER	0.00019	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:36	PER	0.000090	
Lead	Not detected	mg/L	0.002	SW6020	04/25/13 15:48	PER	0.000090	
Manganese, Dissolved	0.881	mg/L	0.010	SW6020	04/25/13 18:36	PER	0.00026	
Manganese	0.820	mg/L	0.010	SW6020	04/25/13 15:48	PER	0.00026	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/25/13 15:27	CCM	0.000008	
Mercury	Not detected	mg/L	0.0001	SW7471A	04/25/13 15:20	CCM	0.000008	
Nickel, Dissolved	0.023	mg/L	0.010	SW6020	04/25/13 18:36	PER	0.00022	
Nickel	0.014	mg/L	0.010	SW6020	04/25/13 15:48	PER	0.00022	
Selenium, Dissolved	0.006	mg/L	0.005	SW6020	04/25/13 18:36	PER	0.0024	
Selenium	Not detected	mg/L	0.005	SW6020	04/25/13 15:48	PER	0.0024	
Silver, Dissolved	0.0035	mg/L	0.0005	SW6020	04/25/13 18:36	PER	0.000070	
Silver	0.0031	mg/L	0.0005	SW6020	04/25/13 15:48	PER	0.000070	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:36	PER	0.000075	
Vanadium	Not detected	mg/L	0.002	SW6020	04/25/13 15:48	PER	0.000075	
Zinc, Dissolved	0.020	mg/L	0.010	SW6020	04/25/13 18:36	PER	0.00064	
Zinc	0.024	mg/L	0.010	SW6020	04/25/13 15:48	PER	0.00064	

Lab Sample ID: S56208.02 (continued)
Sample Tag: MW-13-27(042413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Acetophenone	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	400	
Anthracene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Atrazine	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	300	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	2.7	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	400	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Caprolactam	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	30	
Carbazole	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Chrysene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/26/13 05:04	PL	500	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	500	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	300	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Fluorene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	0.055	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	0.053	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
Isophorone	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	0.028	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	

Lab Sample ID: S56208.02 (continued)
Sample Tag: MW-13-27(042413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Naphthalene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	0.016	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	300	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	200	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Phenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Pyrene	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:04	PL	100	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/25/13 15:17	WAT	0.97	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.18	
Acetone	Not detected	ug/L	10	SW8260B	04/26/13 17:08	WAT	0.56	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.24	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/26/13 17:08	WAT	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/26/13 17:08	WAT	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.50	
Chloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.31	
Bromomethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.32	
Chloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.26	
Chloroform	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.21	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/26/13 17:08	WAT	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/26/13 17:08	WAT	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.20	
Benzene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.19	

Lab Sample ID: S56208.02 (continued)
Sample Tag: MW-13-27(042413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Toluene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.24	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.17	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.18	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.26	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/26/13 17:08	WAT	0.41	
o-Xylene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.25	
Styrene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.25	
Bromoform	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.22	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.19	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.30	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/26/13 17:08	WAT	0.47	

Analytical Laboratory Report

Lab Sample ID: S56208.03
Sample Tag: Dup-1
Collected Date/Time: 04/24/2013 00:01
Matrix: Groundwater
COC Reference: 81479

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/25/13 15:01	PL		
Mercury Digestion	Completed			SW7471A	04/25/13 09:30	CCM		
Mercury Digestion	Completed			SW7471A	04/25/13 09:30	CCM		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
Metal Digestion	Completed			3015A	04/25/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/29/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:31	PER	0.000085	1
Antimony	Not detected	mg/L	0.002	SW6020	04/25/13 15:50	PER	0.000085	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020	04/25/13 18:31	PER	0.00043	1
Arsenic	0.036	mg/L	0.002	SW6020	04/25/13 15:50	PER	0.00043	
Barium, Dissolved	0.064	mg/L	0.010	SW6020	04/25/13 18:31	PER	0.00078	1
Barium	0.520	mg/L	0.010	SW6020	04/25/13 15:50	PER	0.00078	
Boron, Dissolved	0.21	mg/L	0.04	SW6020	04/25/13 18:31	PER	0.0016	1
Boron	0.24	mg/L	0.04	SW6020	04/25/13 15:50	PER	0.0016	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/25/13 18:31	PER	0.00015	1
Cadmium	0.0011	mg/L	0.0010	SW6020	04/25/13 15:50	PER	0.00015	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:31	PER	0.00021	1
Chromium	0.009	mg/L	0.010	SW6020	04/25/13 15:50	PER	0.00021	b
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/25/13 18:31	PER	0.000070	1
Cobalt	0.036	mg/L	0.010	SW6020	04/25/13 15:50	PER	0.000070	
Copper, Dissolved	0.002	mg/L	0.002	SW6020	04/25/13 18:31	PER	0.00019	1
Copper	0.005	mg/L	0.002	SW6020	04/25/13 15:50	PER	0.00019	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:31	PER	0.000090	1
Lead	Not detected	mg/L	0.002	SW6020	04/25/13 15:50	PER	0.000090	
Manganese, Dissolved	0.970	mg/L	0.010	SW6020	04/25/13 18:31	PER	0.00026	1
Manganese	14.8	mg/L	0.010	SW6020	04/25/13 15:50	PER	0.00026	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/25/13 15:24	CCM	0.000008	1
Mercury	0.0009	mg/L	0.0001	SW7471A	04/25/13 15:22	CCM	0.000008	
Nickel, Dissolved	0.022	mg/L	0.010	SW6020	04/25/13 18:31	PER	0.00022	1
Nickel	0.175	mg/L	0.010	SW6020	04/25/13 15:50	PER	0.00022	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	04/25/13 18:31	PER	0.0024	1
Selenium	Not detected	mg/L	0.005	SW6020	04/25/13 15:50	PER	0.0024	
Silver, Dissolved	0.0005	mg/L	0.0005	SW6020	04/25/13 18:31	PER	0.000070	b1
Silver	0.0005	mg/L	0.0005	SW6020	04/25/13 15:50	PER	0.000070	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/25/13 18:31	PER	0.000075	1
Vanadium	0.002	mg/L	0.002	SW6020	04/25/13 15:50	PER	0.000075	
Zinc, Dissolved	1.18	mg/L	0.010	SW6020	04/25/13 18:31	PER	0.00064	1

1-*Filtered and preserved in lab
b-Value detected less than reporting limit, but greater than MDL

Lab Sample ID: S56208.03 (continued)
Sample Tag: Dup-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Metals (continued)								
Zinc	39.4	mg/L	0.010	SW6020	04/25/13 15:50	PER	0.00064	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Acetophenone	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	400	
Anthracene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Atrazine	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	300	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	2.7	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	400	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Caprolactam	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	30	
Carbazole	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Chrysene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/26/13 05:38	PL	500	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	500	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	300	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Fluorene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	0.055	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	0.053	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
Isophorone	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	0.028	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	

Lab Sample ID: S56208.03 (continued)
Sample Tag: Dup-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Naphthalene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	0.016	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	300	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	200	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Phenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Pyrene	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/26/13 05:38	PL	100	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/25/13 15:39	WAT	0.97	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.18	
Acetone	Not detected	ug/L	10	SW8260B	04/26/13 17:30	WAT	0.56	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.24	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/26/13 17:30	WAT	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/26/13 17:30	WAT	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.50	
Chloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.31	
Bromomethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.32	
Chloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.26	
Chloroform	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.21	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/26/13 17:30	WAT	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/26/13 17:30	WAT	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.20	
Benzene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.20	

Lab Sample ID: S56208.03 (continued)
Sample Tag: Dup-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.19	
Toluene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.24	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.17	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.18	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.26	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/26/13 17:30	WAT	0.41	
o-Xylene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.25	
Styrene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.25	
Bromoform	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.22	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.19	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.30	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/26/13 17:30	WAT	0.47	

Analytical Laboratory Report

Lab Sample ID: S56208.04
Sample Tag: Trip Blank
Collected Date/Time: 04/24/2013 00:01
Matrix: Groundwater
COC Reference: 81479

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	04/29/13 10:40	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/25/13 16:01	WAT	0.97	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.18	
Acetone	Not detected	ug/L	10	SW8260B	04/26/13 17:52	WAT	0.56	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.24	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/26/13 17:52	WAT	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/26/13 17:52	WAT	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.50	
Chloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.31	
Bromomethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.32	
Chloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.26	
Chloroform	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.21	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/26/13 17:52	WAT	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/26/13 17:52	WAT	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.20	
Benzene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.19	
Toluene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.24	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.17	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.18	

Lab Sample ID: S56208.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.26	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/26/13 17:52	WAT	0.41	
o-Xylene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.25	
Styrene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.25	
Bromoform	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.22	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.19	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.30	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/26/13 17:52	WAT	0.47	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

81479

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr. Ste. 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4-dioxane	Dissolved Metals	Total Metals	SVOCs	Special Instructions
562081.01	4/24/13	1520	MW-13-30_79-83	GW		2	3	1					3	1	1	1	Please filter the provided
.02	4/24/13	1615	MW-13-27 (042413)	GW		1	3	2					3	1	1	1	Ambers for Dissolved
.03	4/24/13	—	Dup-1	GW		2	3	1					3	1	1	1	Metals in lab.

RELINQUISHED BY: SIGNATURE/ORGANIZATION [signature] ☒ Sampler DATE 4/24/13 TIME 1730
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tedeatra Faust DATE 4/25/13 TIME 800

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.7

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Supplemental Report

Report ID: S56223.01(02)
Generated on 05/01/2013
Replaces report S56223.01(01) generated on 04/29/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56223.01-S56223.02
Project: B0064480.2013.00106
Collected Date: 04/25/2013
Submitted Date/Time: 04/25/2013 16:45
Sampled by: Adam Richmond
P.O. #: B0064480.2013.0

All results are finalized

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56223.01	MW-13-29(042513)	Groundwater	04/25/2013 15:00
S56223.02	MW-13-30(042513)	Groundwater	04/25/2013 15:30

Lab Sample ID: S56223.01
Sample Tag: MW-13-29(042513)
Collected Date/Time: 04/25/2013 15:00
Matrix: Groundwater
COC Reference: 81491

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
1	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/26/13 18:00	EMR		
Mercury Digestion	Completed			SW7471A	04/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	04/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	04/29/13 08:00	PER		
Metal Digestion	Completed			3015A	04/29/13 08:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/29/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/29/13 13:20	PER	0.000085	
Antimony	Not detected	mg/L	0.002	SW6020	04/29/13 13:15	PER	0.000085	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	04/29/13 13:20	PER	0.00043	
Arsenic	0.005	mg/L	0.002	SW6020	04/29/13 13:15	PER	0.00043	
Barium, Dissolved	0.021	mg/L	0.010	SW6020	04/29/13 13:20	PER	0.00078	
Barium	0.056	mg/L	0.010	SW6020	04/29/13 13:15	PER	0.00078	
Boron, Dissolved	0.75	mg/L	0.04	SW6020	04/29/13 13:20	PER	0.0016	
Boron	0.79	mg/L	0.04	SW6020	04/29/13 13:15	PER	0.0016	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/29/13 13:20	PER	0.00015	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/29/13 13:15	PER	0.00015	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/29/13 13:20	PER	0.00021	
Chromium	0.010	mg/L	0.010	SW6020	04/29/13 13:15	PER	0.00021	b
Cobalt, Dissolved	0.012	mg/L	0.010	SW6020	04/29/13 13:20	PER	0.000070	
Cobalt	0.016	mg/L	0.010	SW6020	04/29/13 13:15	PER	0.000070	
Copper, Dissolved	0.003	mg/L	0.002	SW6020	04/29/13 13:20	PER	0.00019	
Copper	0.009	mg/L	0.002	SW6020	04/29/13 13:15	PER	0.00019	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/29/13 13:20	PER	0.000090	
Lead	0.003	mg/L	0.002	SW6020	04/29/13 13:15	PER	0.000090	
Manganese, Dissolved	0.328	mg/L	0.010	SW6020	04/29/13 13:20	PER	0.00026	
Manganese	0.716	mg/L	0.010	SW6020	04/29/13 13:15	PER	0.00026	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/26/13 15:47	CCM	0.000008	
Mercury	Not detected	mg/L	0.0001	SW7471A	04/26/13 15:37	CCM	0.000008	
Nickel, Dissolved	0.061	mg/L	0.010	SW6020	04/29/13 13:20	PER	0.00022	
Nickel	0.064	mg/L	0.010	SW6020	04/29/13 13:15	PER	0.00022	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	04/29/13 13:20	PER	0.0024	
Selenium	Not detected	mg/L	0.005	SW6020	04/29/13 13:15	PER	0.0024	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	04/29/13 13:20	PER	0.000070	
Silver	Not detected	mg/L	0.0005	SW6020	04/29/13 13:15	PER	0.000070	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/29/13 13:20	PER	0.000075	
Vanadium	0.006	mg/L	0.002	SW6020	04/29/13 13:15	PER	0.000075	
Zinc, Dissolved	0.022	mg/L	0.010	SW6020	04/29/13 13:20	PER	0.00064	
Zinc	0.150	mg/L	0.010	SW6020	04/29/13 13:15	PER	0.00064	

b-Value detected less than reporting limit, but greater than MDL

Lab Sample ID: S56223.01 (continued)
Sample Tag: MW-13-29(042513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Acetophenone	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	400	
Anthracene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Atrazine	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	300	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	2.7	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	400	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Caprolactam	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	30	
Carbazole	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Chrysene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/29/13 03:00	PL	500	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	500	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	04/29/13 03:00	PL	300	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Fluorene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	0.055	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	0.053	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
Isophorone	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	0.028	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	

Lab Sample ID: S56223.01 (continued)
Sample Tag: MW-13-29(042513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Naphthalene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	0.016	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	300	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	200	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Phenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Pyrene	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:00	PL	100	
Organics - Volatiles								
1,4-Dioxane	38	ug/L	5	SW8260B - SIM	04/25/13 17:52	WAT	0.97	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.18	
Acetone	Not detected	ug/L	10	SW8260B	04/26/13 19:42	WAT	0.56	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.24	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/26/13 19:42	WAT	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/26/13 19:42	WAT	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.50	
Chloromethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.31	
Bromomethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.32	
Chloroethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.26	
Chloroform	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.21	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/26/13 19:42	WAT	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/26/13 19:42	WAT	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.20	
Benzene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.19	

Lab Sample ID: S56223.01 (continued)
Sample Tag: MW-13-29(042513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Toluene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.24	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.17	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.18	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.26	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/26/13 19:42	WAT	0.41	
o-Xylene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.25	
Styrene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.25	
Bromoform	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.22	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.19	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.30	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/26/13 19:42	WAT	0.47	

Lab Sample ID: S56223.02
Sample Tag: MW-13-30(042513)
Collected Date/Time: 04/25/2013 15:30
Matrix: Groundwater
COC Reference: 81491

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
1	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/26/13 18:00	EMR		
BNA Extraction (Replicate 01)	Completed			3510C	04/29/13 23:13	EMR		
Mercury Digestion	Completed			SW7471A	04/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	04/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	04/29/13 08:00	PER		
Metal Digestion	Completed			3015A	04/29/13 08:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/29/13 10:46	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/29/13 13:22	PER	0.000085	
Antimony	Not detected	mg/L	0.002	SW6020	04/29/13 13:18	PER	0.000085	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	04/29/13 13:22	PER	0.00043	
Arsenic	0.002	mg/L	0.002	SW6020	04/29/13 13:18	PER	0.00043	
Barium, Dissolved	0.085	mg/L	0.010	SW6020	04/29/13 13:22	PER	0.00078	
Barium	0.095	mg/L	0.010	SW6020	04/29/13 13:18	PER	0.00078	
Boron, Dissolved	0.24	mg/L	0.04	SW6020	04/29/13 13:22	PER	0.0016	
Boron	0.23	mg/L	0.04	SW6020	04/29/13 13:18	PER	0.0016	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/29/13 13:22	PER	0.00015	
Cadmium	Not detected	mg/L	0.0010	SW6020	04/29/13 13:18	PER	0.00015	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	04/29/13 13:22	PER	0.00021	
Chromium	Not detected	mg/L	0.010	SW6020	04/29/13 13:18	PER	0.00021	
Cobalt, Dissolved	0.006	mg/L	0.010	SW6020	04/29/13 13:22	PER	0.000070	b
Cobalt	0.006	mg/L	0.010	SW6020	04/29/13 13:18	PER	0.000070	b
Copper, Dissolved	0.004	mg/L	0.002	SW6020	04/29/13 13:22	PER	0.00019	
Copper	0.010	mg/L	0.002	SW6020	04/29/13 13:18	PER	0.00019	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/29/13 13:22	PER	0.000090	
Lead	0.002	mg/L	0.002	SW6020	04/29/13 13:18	PER	0.000090	
Manganese, Dissolved	1.28	mg/L	0.010	SW6020	04/29/13 13:22	PER	0.00026	
Manganese	1.30	mg/L	0.010	SW6020	04/29/13 13:18	PER	0.00026	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/26/13 15:41	CCM	0.000008	
Mercury	Not detected	mg/L	0.0001	SW7471A	04/26/13 15:39	CCM	0.000008	
Nickel, Dissolved	0.038	mg/L	0.010	SW6020	04/29/13 13:22	PER	0.00022	
Nickel	0.037	mg/L	0.010	SW6020	04/29/13 13:18	PER	0.00022	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	04/29/13 13:22	PER	0.0024	
Selenium	Not detected	mg/L	0.005	SW6020	04/29/13 13:18	PER	0.0024	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	04/29/13 13:22	PER	0.000070	
Silver	Not detected	mg/L	0.0005	SW6020	04/29/13 13:18	PER	0.000070	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/29/13 13:22	PER	0.000075	
Vanadium	Not detected	mg/L	0.002	SW6020	04/29/13 13:18	PER	0.000075	
Zinc, Dissolved	0.192	mg/L	0.010	SW6020	04/29/13 13:22	PER	0.00064	

b-Value detected less than reporting limit, but greater than MDL

Lab Sample ID: S56223.02 (continued)
Sample Tag: MW-13-30(042513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Metals (continued)								
Zinc	0.180	mg/L	0.010	SW6020	04/29/13 13:18	PER	0.00064	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
Acetophenone	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	400	
Anthracene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Atrazine	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	04/29/13 03:34	PL	200	
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	300	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	2.7	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	400	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	S
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Caprolactam	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	30	S
Carbazole	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Chrysene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/29/13 03:34	PL	500	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
Diethyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	500	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
bis(2-Ethylhexyl)phthalate	4	ug/L	1	SW8270C	04/29/13 03:34	PL	300	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Fluorene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	0.055	S
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	0.053	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	
Isophorone	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	0.028	S

S-Surrogate recovery outside of control limits

Lab Sample ID: S56223.02 (continued)
Sample Tag: MW-13-30(042513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	S
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Naphthalene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	0.016	S
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	300	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	200	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Phenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
Pyrene	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/29/13 03:34	PL	100	S
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Acetophenone	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	400	
Anthracene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Atrazine	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	04/30/13 19:16	PL	200	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	300	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	2.7	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	400	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Caprolactam	3	ug/L	1	SW8270C	04/30/13 19:16	PL	30	
Carbazole	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Chrysene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	

S-Surrogate recovery outside of control limits
B-Compound also found in associated method blank

Lab Sample ID: S56223.02 (continued)
Sample Tag: MW-13-30(042513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/30/13 19:16	PL	500	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Diethyl phthalate	2	ug/L	1	SW8270C	04/30/13 19:16	PL	500	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
bis(2-Ethylhexyl)phthalate	10	ug/L	1	SW8270C	04/30/13 19:16	PL	300	B
Fluoranthene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Fluorene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	0.055	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	0.053	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
Isophorone	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	0.028	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Naphthalene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	0.016	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	300	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	200	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Phenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Pyrene	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/30/13 19:16	PL	100	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/25/13 17:08	WAT	0.97	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.18	
Acetone	Not detected	ug/L	10	SW8260B	04/26/13 20:04	WAT	0.56	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.24	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/26/13 20:04	WAT	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/26/13 20:04	WAT	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.50	

B-Compound also found in associated method blank

Lab Sample ID: S56223.02 (continued)
Sample Tag: MW-13-30(042513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloromethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.31	
Bromomethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.32	
Chloroethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.26	
Chloroform	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.21	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/26/13 20:04	WAT	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/26/13 20:04	WAT	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.20	
Benzene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.19	
Toluene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.24	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.17	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.18	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.26	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/26/13 20:04	WAT	0.41	
o-Xylene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.25	
Styrene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.25	
Bromoform	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.22	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.19	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.30	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/26/13 20:04	WAT	0.47	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

81491

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr. Ste. 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.225.1940 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Adam Richmond

TURNAROUND TIME REQUIRED ☐ 1 DAY ☑ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4-Dioxane	Dissolved Metals	Total Metals	SVOCs	Special Instructions
56223.01	4/25/13	1500	MW-13-29(042513)	GW	6	2	3	1					3	1	1	1	Please filter dissolved
.02	4/25/13	1530	MW-13-30(042513)	GW	6	2	3	1					3	1	1	1	metals in lab.

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ARCADIS ☑ Sampler DATE: 4/25/13 TIME: 1645
RECEIVED BY: SIGNATURE/ORGANIZATION: Talesha Feuit DATE: 4/25/13 TIME: 1645

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56508.01(01)
Generated on 05/31/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56508.01-S56508.08
Project: RACER-Lansing B0064479.2013.00102/B0064480.2013.00102/B00644
Collected Date: 05/17/2013
Submitted Date/Time: 05/17/2013 15:45
Sampled by: SEthan, ARichmond
P.O. #: B0064481.2013.00102

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56508.01	P2-MH-NW_051713	Groundwater	05/17/2013 10:00
S56508.02	P3-MH-S_051713	Groundwater	05/17/2013 10:40
S56508.03	P3-MH-NE_051713	Groundwater	05/17/2013 11:15
S56508.04	P6-MH-NE_051713	Groundwater	05/17/2013 12:35
S56508.05	P6-MH2-SW_051713	Groundwater	05/17/2013 13:05
S56508.06	P6-MH-SW_051713	Groundwater	05/17/2013 13:35
S56508.07	ESC-1_051713	Groundwater	05/17/2013 14:30
S56508.08	P2Outfall@P3_051713	Groundwater	05/17/2013 15:00

Analytical Laboratory Report

Lab Sample ID: S56508.01
Sample Tag: P2-MH-NW_051713
Collected Date/Time: 05/17/2013 10:00
Matrix: Groundwater
COC Reference: 74219

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/20/13 12:00	CCM		
Metal Digestion	Completed			3015A	05/29/13 11:00	JRH		
pH check for VOCs	<2	STD Units		N/A	05/21/13 10:22	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	05/30/13 12:34	JRH	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	05/30/13 12:34	JRH	7440-38-2	
Barium	0.072	mg/L	0.005	SW6020	05/30/13 12:34	JRH	7440-39-3	
Boron	0.20	mg/L	0.05	SW6020	05/30/13 12:34	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	05/30/13 12:34	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	05/30/13 12:34	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	05/30/13 12:34	JRH	7440-48-4	
Copper	Not detected	mg/L	0.004	SW6020	05/30/13 12:34	JRH	7440-50-8	
Lead	0.005	mg/L	0.003	SW6020	05/30/13 12:34	JRH	7439-92-1	
Manganese	0.065	mg/L	0.005	SW6020	05/30/13 12:34	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/20/13 15:56	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	05/30/13 12:34	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	05/30/13 12:34	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	05/30/13 12:34	JRH	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020	05/30/13 12:34	JRH	7440-62-2	
Zinc	0.020	mg/L	0.005	SW6020	05/30/13 12:34	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	05/29/13 15:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	91-58-7	

Lab Sample ID: S56508.01 (continued)
Sample Tag: P2-MH-NW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 15:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	05/29/13 15:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 15:50	PL	118-74-1	

Lab Sample ID: S56508.01 (continued)
Sample Tag: P2-MH-NW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	26	ug/L	5	SW8260B - SIM	05/20/13 19:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/20/13 16:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/20/13 16:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/20/13 16:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	67-66-3	
1,1,1-Trichloroethane	2	ug/L	1	SW8260B	05/20/13 16:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/20/13 16:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/20/13 16:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/20/13 16:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	120-82-1	

Lab Sample ID: S56508.01 (continued)
Sample Tag: P2-MH-NW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/20/13 16:52	WAT	96-12-8	

Lab Sample ID: S56508.02
Sample Tag: P3-MH-S_051713
Collected Date/Time: 05/17/2013 10:40
Matrix: Groundwater
COC Reference: 74219

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/20/13 12:00	CCM		
Metal Digestion	Completed			3015A	05/29/13 11:00	JRH		
pH check for VOCs	<2	STD Units		N/A	05/21/13 10:22	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	05/30/13 12:38	JRH	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	05/30/13 12:38	JRH	7440-38-2	
Barium	0.111	mg/L	0.005	SW6020	05/30/13 12:38	JRH	7440-39-3	
Boron	0.15	mg/L	0.05	SW6020	05/30/13 12:38	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	05/30/13 12:38	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	05/30/13 12:38	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	05/30/13 12:38	JRH	7440-48-4	
Copper	Not detected	mg/L	0.004	SW6020	05/30/13 12:38	JRH	7440-50-8	
Lead	0.009	mg/L	0.003	SW6020	05/30/13 12:38	JRH	7439-92-1	
Manganese	0.146	mg/L	0.005	SW6020	05/30/13 12:38	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/20/13 15:58	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	05/30/13 12:38	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	05/30/13 12:38	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	05/30/13 12:38	JRH	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020	05/30/13 12:38	JRH	7440-62-2	
Zinc	0.016	mg/L	0.005	SW6020	05/30/13 12:38	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	91-58-7	

Lab Sample ID: S56508.02 (continued)
Sample Tag: P3-MH-S_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 16:23	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 16:23	PL	118-74-1	

Lab Sample ID: S56508.02 (continued)
Sample Tag: P3-MH-S_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	15	ug/L	5	SW8260B - SIM	05/20/13 19:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/20/13 17:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/20/13 17:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/20/13 17:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/20/13 17:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/20/13 17:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/20/13 17:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	120-82-1	

Lab Sample ID: S56508.02 (continued)
Sample Tag: P3-MH-S_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/20/13 17:12	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56508.03
Sample Tag: P3-MH-NE_051713
Collected Date/Time: 05/17/2013 11:15
Matrix: Groundwater
COC Reference: 74219

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/20/13 12:00	CCM		
Metal Digestion	Completed			3015A	05/29/13 11:00	JRH		
pH check for VOCs	<2	STD Units		N/A	05/21/13 10:22	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	05/30/13 12:43	JRH	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	05/30/13 12:43	JRH	7440-38-2	
Barium	0.078	mg/L	0.005	SW6020	05/30/13 12:43	JRH	7440-39-3	
Boron	0.23	mg/L	0.05	SW6020	05/30/13 12:43	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	05/30/13 12:43	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	05/30/13 12:43	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	05/30/13 12:43	JRH	7440-48-4	
Copper	Not detected	mg/L	0.004	SW6020	05/30/13 12:43	JRH	7440-50-8	
Lead	0.004	mg/L	0.003	SW6020	05/30/13 12:43	JRH	7439-92-1	
Manganese	0.090	mg/L	0.005	SW6020	05/30/13 12:43	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/20/13 16:00	CCM	7439-97-6	
Nickel	0.018	mg/L	0.005	SW6020	05/30/13 12:43	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	05/30/13 12:43	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	05/30/13 12:43	JRH	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020	05/30/13 12:43	JRH	7440-62-2	
Zinc	0.018	mg/L	0.005	SW6020	05/30/13 12:43	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	91-58-7	

Lab Sample ID: S56508.03 (continued)
Sample Tag: P3-MH-NE_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 16:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	05/29/13 16:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 16:56	PL	118-74-1	

Lab Sample ID: S56508.03 (continued)
Sample Tag: P3-MH-NE_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/20/13 20:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/20/13 17:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/20/13 17:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/20/13 17:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/20/13 17:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/20/13 17:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/20/13 17:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	120-82-1	

Lab Sample ID: S56508.03 (continued)
Sample Tag: P3-MH-NE_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/20/13 17:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56508.04
Sample Tag: P6-MH-NE_051713
Collected Date/Time: 05/17/2013 12:35
Matrix: Groundwater
COC Reference: 74219

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/20/13 12:00	CCM		
Metal Digestion	Completed			3015A	05/29/13 11:00	JRH		
pH check for VOCs	<2	STD Units		N/A	05/21/13 10:22	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	05/30/13 12:47	JRH	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020	05/30/13 12:47	JRH	7440-38-2	
Barium	0.195	mg/L	0.005	SW6020	05/30/13 12:47	JRH	7440-39-3	
Boron	0.14	mg/L	0.05	SW6020	05/30/13 12:47	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	05/30/13 12:47	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	05/30/13 12:47	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	05/30/13 12:47	JRH	7440-48-4	
Copper	Not detected	mg/L	0.004	SW6020	05/30/13 12:47	JRH	7440-50-8	
Lead	0.008	mg/L	0.003	SW6020	05/30/13 12:47	JRH	7439-92-1	
Manganese	0.491	mg/L	0.005	SW6020	05/30/13 12:47	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/20/13 16:02	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	05/30/13 12:47	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	05/30/13 12:47	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	05/30/13 12:47	JRH	7440-22-4	
Vanadium	0.007	mg/L	0.004	SW6020	05/30/13 12:47	JRH	7440-62-2	
Zinc	0.007	mg/L	0.005	SW6020	05/30/13 12:47	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	05/29/13 17:30	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	91-58-7	

Lab Sample ID: S56508.04 (continued)
Sample Tag: P6-MH-NE_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 17:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	86-30-6	
Naphthalene	2	ug/L	1	SW8270C	05/29/13 17:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 17:30	PL	118-74-1	

Lab Sample ID: S56508.04 (continued)
Sample Tag: P6-MH-NE_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/20/13 20:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	76-13-1	X
Acetone	Not detected	ug/L	50	SW8260B	05/20/13 19:12	WAT	67-64-1	X
Carbon disulfide	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-15-0	X
Methyl Acetate	Not detected	ug/L	50	SW8260B	05/20/13 19:12	WAT	79-20-9	X
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	1634-04-4	X
2-Butanone (MEK)	Not detected	ug/L	50	SW8260B	05/20/13 19:12	WAT	78-93-3	X
Dichlorodifluoromethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-71-8	X
Chloromethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	74-87-3	X
Vinyl chloride	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-01-4	X
Bromomethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	74-83-9	X
Chloroethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-00-3	X
Trichlorofluoromethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-69-4	X
1,1-Dichloroethene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-35-4	X
Methylene chloride	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-09-2	X
trans-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	156-60-5	X
1,1-Dichloroethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-34-3	X
cis-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	156-59-2	X
Chloroform	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	67-66-3	X
1,1,1-Trichloroethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	71-55-6	X
Cyclohexane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	110-82-7	X
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	SW8260B	05/20/13 19:12	WAT	108-10-1	X
2-Hexanone	Not detected	ug/L	50	SW8260B	05/20/13 19:12	WAT	591-78-6	X
Carbon tetrachloride	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	56-23-5	X
Benzene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	71-43-2	X
1,2-Dichloroethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	107-06-2	X
Trichloroethene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	79-01-6	X
1,2-Dichloropropane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	78-87-5	X
Bromodichloromethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-27-4	X
Methyl cyclohexane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	108-87-2	X
cis-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	10061-01-5	X
Toluene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	108-88-3	X
trans-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	10061-02-6	X
1,1,2-Trichloroethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	79-00-5	X
Tetrachloroethene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	127-18-4	X
Dibromochloromethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	124-48-1	X
Chlorobenzene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	108-90-7	X
1,1,2,2-Tetrachloroethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	79-34-5	X
Ethylbenzene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	100-41-4	X
p,m-Xylene	Not detected	ug/L	10	SW8260B	05/20/13 19:12	WAT		X
o-Xylene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	95-47-6	X
Styrene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	100-42-5	X
Isopropylbenzene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	98-82-8	X
Bromoform	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	75-25-2	X
1,3-Dichlorobenzene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	541-73-1	X
1,4-Dichlorobenzene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	106-46-7	X
1,2-Dichlorobenzene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	95-50-1	X

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S56508.04 (continued)
Sample Tag: P6-MH-NE_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	120-82-1	X
1,2-Dibromoethane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	106-93-4	X
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	SW8260B	05/20/13 19:12	WAT	96-12-8	X

X-Elevated reporting limit due to matrix interference

Analytical Laboratory Report

Lab Sample ID: S56508.05
Sample Tag: P6-MH2-SW_051713
Collected Date/Time: 05/17/2013 13:05
Matrix: Groundwater
COC Reference: 74219

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/20/13 12:00	CCM		
Metal Digestion	Completed			3015A	05/29/13 11:00	JRH		
pH check for VOCs	<2	STD Units		N/A	05/21/13 10:22	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	05/30/13 12:51	JRH	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	05/30/13 12:51	JRH	7440-38-2	
Barium	0.044	mg/L	0.005	SW6020	05/30/13 12:51	JRH	7440-39-3	
Boron	0.19	mg/L	0.05	SW6020	05/30/13 12:51	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	05/30/13 12:51	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	05/30/13 12:51	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	05/30/13 12:51	JRH	7440-48-4	
Copper	0.010	mg/L	0.004	SW6020	05/30/13 12:51	JRH	7440-50-8	
Lead	0.005	mg/L	0.003	SW6020	05/30/13 12:51	JRH	7439-92-1	
Manganese	0.044	mg/L	0.005	SW6020	05/30/13 12:51	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/20/13 16:04	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	05/30/13 12:51	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	05/30/13 12:51	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	05/30/13 12:51	JRH	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020	05/30/13 12:51	JRH	7440-62-2	
Zinc	0.011	mg/L	0.005	SW6020	05/30/13 12:51	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	91-58-7	

Lab Sample ID: S56508.05 (continued)
Sample Tag: P6-MH2-SW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 18:03	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	05/29/13 18:03	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 18:03	PL	118-74-1	

Lab Sample ID: S56508.05 (continued)
Sample Tag: P6-MH2-SW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/20/13 20:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/20/13 17:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/20/13 17:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/20/13 17:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/20/13 17:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/20/13 17:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	79-34-5	
Ethylbenzene	3	ug/L	1	SW8260B	05/20/13 17:52	WAT	100-41-4	
p,m-Xylene	18	ug/L	2	SW8260B	05/20/13 17:52	WAT		
o-Xylene	4	ug/L	1	SW8260B	05/20/13 17:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	120-82-1	

Lab Sample ID: S56508.05 (continued)
Sample Tag: P6-MH2-SW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/20/13 17:52	WAT	96-12-8	

Lab Sample ID: S56508.06
Sample Tag: P6-MH-SW_051713
Collected Date/Time: 05/17/2013 13:35
Matrix: Groundwater
COC Reference: 74219

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/20/13 12:00	CCM		
Metal Digestion	Completed			3015A	05/29/13 11:00	JRH		
pH check for VOCs	<2	STD Units		N/A	05/21/13 10:22	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	05/30/13 13:04	JRH	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	05/30/13 13:04	JRH	7440-38-2	
Barium	0.041	mg/L	0.005	SW6020	05/30/13 13:04	JRH	7440-39-3	
Boron	0.20	mg/L	0.05	SW6020	05/30/13 13:04	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	05/30/13 13:04	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	05/30/13 13:04	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	05/30/13 13:04	JRH	7440-48-4	
Copper	Not detected	mg/L	0.004	SW6020	05/30/13 13:04	JRH	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	05/30/13 13:04	JRH	7439-92-1	
Manganese	0.021	mg/L	0.005	SW6020	05/30/13 13:04	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/20/13 16:06	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	05/30/13 13:04	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	05/30/13 13:04	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	05/30/13 13:04	JRH	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020	05/30/13 13:04	JRH	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	05/30/13 13:04	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	91-58-7	

Lab Sample ID: S56508.06 (continued)
Sample Tag: P6-MH-SW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 18:36	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 18:36	PL	118-74-1	

Lab Sample ID: S56508.06 (continued)
Sample Tag: P6-MH-SW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/20/13 21:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/20/13 18:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/20/13 18:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/20/13 18:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/20/13 18:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/20/13 18:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	79-34-5	
Ethylbenzene	5	ug/L	1	SW8260B	05/20/13 18:12	WAT	100-41-4	
p,m-Xylene	30	ug/L	2	SW8260B	05/20/13 18:12	WAT		
o-Xylene	7	ug/L	1	SW8260B	05/20/13 18:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	120-82-1	

Lab Sample ID: S56508.06 (continued)
Sample Tag: P6-MH-SW_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/20/13 18:12	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56508.07
Sample Tag: ESC-1_051713
Collected Date/Time: 05/17/2013 14:30
Matrix: Groundwater
COC Reference: 74219

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/20/13 12:00	CCM		
Metal Digestion	Completed			3015A	05/29/13 11:00	JRH		
pH check for VOCs	<2	STD Units		N/A	05/21/13 10:22	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	05/30/13 12:56	JRH	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	05/30/13 12:56	JRH	7440-38-2	
Barium	0.016	mg/L	0.005	SW6020	05/30/13 12:56	JRH	7440-39-3	
Boron	Not detected	mg/L	0.05	SW6020	05/30/13 12:56	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	05/30/13 12:56	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	05/30/13 12:56	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	05/30/13 12:56	JRH	7440-48-4	
Copper	0.015	mg/L	0.004	SW6020	05/30/13 12:56	JRH	7440-50-8	
Lead	0.004	mg/L	0.003	SW6020	05/30/13 12:56	JRH	7439-92-1	
Manganese	0.008	mg/L	0.005	SW6020	05/30/13 12:56	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/20/13 16:08	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	05/30/13 12:56	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	05/30/13 12:56	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	05/30/13 12:56	JRH	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020	05/30/13 12:56	JRH	7440-62-2	
Zinc	0.010	mg/L	0.005	SW6020	05/30/13 12:56	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	91-58-7	

Lab Sample ID: S56508.07 (continued)
Sample Tag: ESC-1_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 19:10	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 19:10	PL	118-74-1	

Lab Sample ID: S56508.07 (continued)
Sample Tag: ESC-1_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/21/13 16:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/20/13 18:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/20/13 18:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/20/13 18:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/20/13 18:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/20/13 18:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/20/13 18:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	120-82-1	

Lab Sample ID: S56508.07 (continued)
Sample Tag: ESC-1_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/20/13 18:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56508.08
Sample Tag: P2Outfall@P3_051713
Collected Date/Time: 05/17/2013 15:00
Matrix: Groundwater
COC Reference: 74219

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/20/13 12:00	CCM		
Metal Digestion	Completed			3015A	05/29/13 11:00	JRH		
pH check for VOCs	<2	STD Units		N/A	05/21/13 10:27	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	05/30/13 13:00	JRH	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	05/30/13 13:00	JRH	7440-38-2	
Barium	0.107	mg/L	0.005	SW6020	05/30/13 13:00	JRH	7440-39-3	
Boron	0.15	mg/L	0.05	SW6020	05/30/13 13:00	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	05/30/13 13:00	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	05/30/13 13:00	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	05/30/13 13:00	JRH	7440-48-4	
Copper	Not detected	mg/L	0.004	SW6020	05/30/13 13:00	JRH	7440-50-8	
Lead	0.008	mg/L	0.003	SW6020	05/30/13 13:00	JRH	7439-92-1	
Manganese	0.087	mg/L	0.005	SW6020	05/30/13 13:00	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/20/13 16:12	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	05/30/13 13:00	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	05/30/13 13:00	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	05/30/13 13:00	JRH	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020	05/30/13 13:00	JRH	7440-62-2	
Zinc	0.009	mg/L	0.005	SW6020	05/30/13 13:00	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	91-58-7	

Lab Sample ID: S56508.08 (continued)
Sample Tag: P2Outfall@P3_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 19:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	05/29/13 19:43	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 19:43	PL	118-74-1	

Lab Sample ID: S56508.08 (continued)
Sample Tag: P2Outfall@P3_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	15	ug/L	5	SW8260B - SIM	05/20/13 21:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/20/13 18:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/20/13 18:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/20/13 18:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/20/13 18:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/20/13 18:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/20/13 18:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	120-82-1	

Lab Sample ID: S56508.08 (continued)
Sample Tag: P2Outfall@P3_051713

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/20/13 18:52	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

74219

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christansen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr, STE 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO. | P.O. NO.
E-MAIL ADDRESS | QUOTE NO.

INVOICE TO

CONTACT NAME | SAME: X
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | E-MAIL ADDRESS

PROJECT NO./NAME: Racer - Lansing
B0064479.2013.00102/B0064480.2013.00102/B0064481.2013.00102
SAMPLER(S) - PLEASE PRINT/SIGN NAME: S. Ethen / A. Richmond /

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs (+ 1,4-Dioxane SIMS)	TCL SVOCs	TAL Metals
56508.01	5/17/13	1000	P2-MH-NW_051713	GW	5	1	3	1					3	1	1
.02	5/17/13	1040	P3-MH-S-051713	GW	5	1	3	1					3	1	1
.03	5/17/13	1115	P3-MH-NE_051713	GW	5	1	3	1					3	1	1
.04	5/17/13	1235	P6-MH-NE_051713	GW	5	1	3	1					3	1	1
.05	5/17/13	1305	P6-MH-SW_051713	GW	5	1	3	1					3	1	1
.06	5/17/13	1335	P6-MH-SW-051713	GW	5	1	3	1					3	1	1
.07	5/17/13	1430	ESC-1_051713	GW	5	1	3	1					3	1	1
.08	5/17/13	1500	P2 Outfall @ P3_051713	GW	5	1	3	1					3	1	1

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] X ☐ Sampler DATE: 5/17/13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 5/17/13 TIME: 1545

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 0.9

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56570.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
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Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56570.01-S56570.04
Project: Lansing Plant Project# B0064481.2013.00603
Collected Date: 05/23/2013
Submitted Date/Time: 05/24/2013 09:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56570.01	MW-12-11	Groundwater	05/23/2013 13:58
S56570.02	MW-12-16	Groundwater	05/23/2013 16:55
S56570.03	EQ-3	Liquid	05/23/2013 14:13
S56570.04	Trip Blank	Liquid	05/23/2013 09:30

Analytical Laboratory Report

Lab Sample ID: S56570.01
Sample Tag: MW-12-11
Collected Date/Time: 05/23/2013 13:58
Matrix: Groundwater
COC Reference: 74259

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:09	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	06/10/13 18:09	PER	7440-38-2	
Barium	0.107	mg/L	0.010	SW6020	06/10/13 18:09	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 18:09	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:09	PER	7440-43-9	
Chromium	0.012	mg/L	0.010	SW6020	06/10/13 18:09	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:09	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	06/10/13 18:09	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:09	PER	7439-92-1	
Manganese	0.889	mg/L	0.010	SW6020	06/10/13 18:09	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:10	CCM	7439-97-6	
Nickel	0.026	mg/L	0.010	SW6020	06/10/13 18:09	PER	7440-02-0	
Selenium	0.007	mg/L	0.005	SW6020	06/10/13 18:09	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:09	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:09	PER	7440-62-2	
Zinc	0.061	mg/L	0.010	SW6020	06/10/13 18:09	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	91-58-7	

Lab Sample ID: S56570.01 (continued)
Sample Tag: MW-12-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 18:23	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 18:23	PL	118-74-1	

Lab Sample ID: S56570.01 (continued)
Sample Tag: MW-12-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 21:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 18:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 18:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 18:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 18:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 18:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 18:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	120-82-1	

Lab Sample ID: S56570.01 (continued)
Sample Tag: MW-12-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 18:31	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56570.02
Sample Tag: MW-12-16
Collected Date/Time: 05/23/2013 16:55
Matrix: Groundwater
COC Reference: 74259

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:12	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020	06/10/13 18:12	PER	7440-38-2	
Barium	0.213	mg/L	0.010	SW6020	06/10/13 18:12	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/10/13 18:12	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:12	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:12	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:12	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 18:12	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:12	PER	7439-92-1	
Manganese	0.345	mg/L	0.010	SW6020	06/10/13 18:12	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:12	CCM	7439-97-6	
Nickel	0.013	mg/L	0.010	SW6020	06/10/13 18:12	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:12	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:12	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:12	PER	7440-62-2	
Zinc	0.013	mg/L	0.010	SW6020	06/10/13 18:12	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	91-58-7	

Lab Sample ID: S56570.02 (continued)
Sample Tag: MW-12-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 18:57	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	3	ug/L	1	SW8270C	06/04/13 18:57	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 18:57	PL	118-74-1	

Lab Sample ID: S56570.02 (continued)
Sample Tag: MW-12-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 21:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 18:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 18:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 18:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 18:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 18:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 18:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	120-82-1	

Lab Sample ID: S56570.02 (continued)
Sample Tag: MW-12-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 18:52	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56570.03
Sample Tag: EQ-3
Collected Date/Time: 05/23/2013 14:13
Matrix: Liquid
COC Reference: 74259

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:14	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 18:14	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/10/13 18:14	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 18:14	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:14	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:14	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:14	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 18:14	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:14	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/10/13 18:14	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:24	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 18:14	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:14	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:14	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:14	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/10/13 18:14	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	91-58-7	

Lab Sample ID: S56570.03 (continued)
Sample Tag: EQ-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 19:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/04/13 19:30	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 19:30	PL	118-74-1	

Lab Sample ID: S56570.03 (continued)
Sample Tag: EQ-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 21:45	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 19:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 19:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 19:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 19:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 19:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 19:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	120-82-1	

Lab Sample ID: S56570.03 (continued)
Sample Tag: EQ-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 19:12	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56570.04
Sample Tag: Trip Blank
Collected Date/Time: 05/23/2013 09:30
Matrix: Liquid
COC Reference: 74259

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 15:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 15:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 15:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 15:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 15:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 15:10	WAT		

Lab Sample ID: S56570.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 15:10	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74259

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006441.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE STORMER

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1,4-dioxane (SIM)
56570.01	5/23	1358	MW-12-11	GW	6	2	3	1					X	X		X	X
.02	5/23	1655	MW-12-16	GW	6	2	3	1					X	X		X	X
.03	5/23	1413	EQ-3	L	6	2	3	1					X	X		X	X
.04	5/23	0930	TRIP BLANK	L	2		2						X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] ☒ Sampler DATE 5/23/13 TIME 1730
RECEIVED BY: SIGNATURE/ORGANIZATION: PM Storage DATE 5/23/13 TIME 1900

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] DATE 5-24-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Faust DATE 5-24-13 TIME 930

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] [signature] DATE 5-24-13 TIME 900

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56571.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56571.01-S56571.03
Project: Lansing Plant Project# B0064480.2013.00603
Collected Date: 05/22/2013 - 05/23/2013
Submitted Date/Time: 05/24/2013 09:30
Sampled by: Joe Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56571.01	Trip Blank	Groundwater	05/22/2013 00:01
S56571.02	MW-91-5	Groundwater	05/22/2013 10:37
S56571.03	MW-12-04	Groundwater	05/23/2013 10:46

Analytical Laboratory Report

Lab Sample ID: S56571.01
Sample Tag: Trip Blank
Collected Date/Time: 05/22/2013 00:01
Matrix: Groundwater
COC Reference: 74266

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 18:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 18:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 18:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 18:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 18:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 18:06	WAT		

Lab Sample ID: S56571.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 18:06	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56571.02
Sample Tag: MW-91-5
Collected Date/Time: 05/22/2013 10:37
Matrix: Groundwater
COC Reference: 74266

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:15	PER	7440-36-0	
Arsenic	0.010	mg/L	0.002	SW6020	06/10/13 18:15	PER	7440-38-2	
Barium	0.337	mg/L	0.010	SW6020	06/10/13 18:15	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020	06/10/13 18:15	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:15	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:15	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:15	PER	7440-48-4	
Copper	0.002	mg/L	0.002	SW6020	06/10/13 18:15	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:15	PER	7439-92-1	
Manganese	0.085	mg/L	0.010	SW6020	06/10/13 18:15	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:26	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 18:15	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:15	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:15	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:15	PER	7440-62-2	
Zinc	0.021	mg/L	0.010	SW6020	06/10/13 18:15	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/04/13 20:04	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	85-68-7	

B-Compound also found in associated method blank

Lab Sample ID: S56571.02 (continued)
Sample Tag: MW-91-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 20:04	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 20:04	PL	118-74-1	

Lab Sample ID: S56571.02 (continued)
Sample Tag: MW-91-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 22:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 22:47	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 22:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 22:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 22:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 22:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 22:47	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	120-82-1	

Lab Sample ID: S56571.02 (continued)
Sample Tag: MW-91-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 22:47	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56571.03
Sample Tag: MW-12-04
Collected Date/Time: 05/23/2013 10:46
Matrix: Groundwater
COC Reference: 74266

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:17	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 18:17	PER	7440-38-2	
Barium	0.029	mg/L	0.010	SW6020	06/10/13 18:17	PER	7440-39-3	
Boron	0.14	mg/L	0.04	SW6020	06/10/13 18:17	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:17	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:17	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:17	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 18:17	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:17	PER	7439-92-1	
Manganese	0.431	mg/L	0.010	SW6020	06/10/13 18:17	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:28	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 18:17	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:17	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:17	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:17	PER	7440-62-2	
Zinc	0.011	mg/L	0.010	SW6020	06/10/13 18:17	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	91-58-7	

Lab Sample ID: S56571.03 (continued)
Sample Tag: MW-12-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 20:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 20:38	PL	118-74-1	

Lab Sample ID: S56571.03 (continued)
Sample Tag: MW-12-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 22:29	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 23:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 23:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 23:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 23:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 23:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 23:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	120-82-1	

Lab Sample ID: S56571.03 (continued)
Sample Tag: MW-12-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 23:07	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74266

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: | ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP'CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006440.2013.00603
SAMPLER(S) - PLEASE PRINT & SIGN NAME: Joe Cwinschlag

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	VOCs 1,4-Dioxane 8260SIM
56571.01	5/22/13	—	Trip Blank	GW	2		X						X				
.02	5/22/13	1037	MW-91-5	GW	6	2	3	1					X	X		X	X
.03	5/23/13	1046	MW-12-04	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Joseph Cwinschlag / ARCADIS (Sampler)	5/23/13	1814
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
/ PME	5/23/13	18:14
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
/ PME	5/23/13	19:00
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
PM Storage	5/23/13	19:00

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	5-24-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Tabitha Faust	5-24-13	900

SEAL NO.	SEAL INTACT	INITIALS
	YES ☐ NO ☐	
SEAL NO.	SEAL INTACT	INITIALS
	YES ☐ NO ☐	

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56587.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56587.01-S56587.05
Project: Lansing Plant 3 Project# B0064480.2013.00603
Collected Date: 05/24/2013
Submitted Date/Time: 05/24/2013 15:30
Sampled by: RPrigge/JRumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56587.01	MW-04-01 (3)	Groundwater	05/24/2013 11:25
S56587.02	MW-12-20	Groundwater	05/24/2013 13:47
S56587.03	EB-4	Liquid	05/24/2013 14:50
S56587.04	Trip Blank	Liquid	05/24/2013 00:01
S56587.05	MW-13-29	Groundwater	05/24/2013 14:25

Analytical Laboratory Report

Lab Sample ID: S56587.01
Sample Tag: MW-04-01 (3)
Collected Date/Time: 05/24/2013 11:25
Matrix: Groundwater
COC Reference: 74252

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/28/13 15:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:19	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 18:19	PER	7440-38-2	
Barium	0.287	mg/L	0.010	SW6020	06/10/13 18:19	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	06/10/13 18:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:19	PER	7440-48-4	
Copper	0.022	mg/L	0.002	SW6020	06/10/13 18:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:19	PER	7439-92-1	
Manganese	0.350	mg/L	0.010	SW6020	06/10/13 18:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:30	CCM	7439-97-6	
Nickel	0.010	mg/L	0.010	SW6020	06/10/13 18:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:19	PER	7440-22-4	
Vanadium	0.005	mg/L	0.002	SW6020	06/10/13 18:19	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/10/13 18:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	91-58-7	

Lab Sample ID: S56587.01 (continued)
Sample Tag: MW-04-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 21:11	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 21:11	PL	118-74-1	

Lab Sample ID: S56587.01 (continued)
Sample Tag: MW-04-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/28/13 19:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 19:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 19:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 19:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 19:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 19:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 19:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	120-82-1	

Lab Sample ID: S56587.01 (continued)
Sample Tag: MW-04-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 19:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56587.02
Sample Tag: MW-12-20
Collected Date/Time: 05/24/2013 13:47
Matrix: Groundwater
COC Reference: 74252

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/28/13 15:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:20	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 18:20	PER	7440-38-2	
Barium	0.129	mg/L	0.010	SW6020	06/10/13 18:20	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020	06/10/13 18:20	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:20	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:20	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:20	PER	7440-48-4	
Copper	0.020	mg/L	0.002	SW6020	06/10/13 18:20	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:20	PER	7439-92-1	
Manganese	0.138	mg/L	0.010	SW6020	06/10/13 18:20	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:32	CCM	7439-97-6	
Nickel	0.013	mg/L	0.010	SW6020	06/10/13 18:20	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:20	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:20	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:20	PER	7440-62-2	
Zinc	0.020	mg/L	0.010	SW6020	06/10/13 18:20	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	91-58-7	

Lab Sample ID: S56587.02 (continued)
Sample Tag: MW-12-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 21:45	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/04/13 21:45	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 21:45	PL	118-74-1	

Lab Sample ID: S56587.02 (continued)
Sample Tag: MW-12-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/28/13 19:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 16:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 16:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 16:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 16:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 16:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 16:33	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	120-82-1	

Lab Sample ID: S56587.02 (continued)
Sample Tag: MW-12-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 16:33	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56587.03
Sample Tag: EB-4
Collected Date/Time: 05/24/2013 14:50
Matrix: Liquid
COC Reference: 74252

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/31/13 10:26	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:25	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 18:25	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/10/13 18:25	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 18:25	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:25	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:25	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:25	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 18:25	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:25	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/10/13 18:25	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:34	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 18:25	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:25	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:25	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:25	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/10/13 18:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	91-58-7	

Lab Sample ID: S56587.03 (continued)
Sample Tag: EB-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 22:18	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 22:18	PL	118-74-1	

Lab Sample ID: S56587.03 (continued)
Sample Tag: EB-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 15:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 15:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 15:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 15:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 15:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 15:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 15:31	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56587.04
Sample Tag: Trip Blank
Collected Date/Time: 05/24/2013 00:01
Matrix: Liquid
COC Reference: 74252

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/31/13 10:26	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 15:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 15:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 15:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 15:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 15:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 15:51	WAT		

Lab Sample ID: S56587.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 15:51	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56587.05
Sample Tag: MW-13-29
Collected Date/Time: 05/24/2013 14:25
Matrix: Groundwater
COC Reference: 74252

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/28/13 15:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:27	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020	06/10/13 18:27	PER	7440-38-2	
Barium	0.021	mg/L	0.010	SW6020	06/10/13 18:27	PER	7440-39-3	
Boron	0.77	mg/L	0.04	SW6020	06/10/13 18:27	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:27	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:27	PER	7440-47-3	
Cobalt	0.016	mg/L	0.010	SW6020	06/10/13 18:27	PER	7440-48-4	
Copper	0.002	mg/L	0.002	SW6020	06/10/13 18:27	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:27	PER	7439-92-1	
Manganese	0.560	mg/L	0.010	SW6020	06/10/13 18:27	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:36	CCM	7439-97-6	
Nickel	0.054	mg/L	0.010	SW6020	06/10/13 18:27	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:27	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:27	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:27	PER	7440-62-2	
Zinc	0.033	mg/L	0.010	SW6020	06/10/13 18:27	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	91-58-7	

Lab Sample ID: S56587.05 (continued)
Sample Tag: MW-13-29

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 20:01	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	3	ug/L	1	SW8270C	06/05/13 20:01	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 20:01	PL	118-74-1	

Lab Sample ID: S56587.05 (continued)
Sample Tag: MW-13-29

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	30	ug/L	5	SW8260B - SIM	05/28/13 19:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	76-13-1	
Acetone	13	ug/L	10	SW8260B	05/30/13 20:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 20:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 20:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 20:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 20:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	10061-01-5	
Toluene	5	ug/L	1	SW8260B	05/30/13 20:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	79-34-5	
Ethylbenzene	1	ug/L	1	SW8260B	05/30/13 20:12	WAT	100-41-4	
p,m-Xylene	2	ug/L	2	SW8260B	05/30/13 20:12	WAT		
o-Xylene	1	ug/L	1	SW8260B	05/30/13 20:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	120-82-1	

Lab Sample ID: S56587.05 (continued)
Sample Tag: MW-13-29

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 20:12	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74252

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B0064490.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joe Rumschlag Robert Prigge

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (wHg)	1,4-dioxane 8260 SIM					
56587.01	5/24/13	11:25	MW-04-01 (3)	GW	6	2	3	1					X	X		X	X					
.02	5/24/13	13:47	MW-12-20	GW	6	2	3	1					X	X		X	X					
.03	5/24/13	14:50	EB-4	L	6	2	3	1					X	X		X						
.04	5/24/13	—	Trip Blank	L	2		2						X									
.05	5/24/13	14:25	MW-13-29	GW	6	2	3	1					X	X		X	X					

RELINQUISHED BY: Joseph Rumschlag / Robert Prigge SIGNATURE/ORGANIZATION	☑ Sampler	DATE 5-24-13	TIME 1505
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 5-24-13	TIME 1505
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 5-24-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabata Fout	DATE 5-24-13	TIME 1530
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56588.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56588.01-S56588.03
Project: Lansing Plant 2 Project# B0064479.2013.00603
Collected Date: 05/24/2013
Submitted Date/Time: 05/24/2013 15:30
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56588.01	Trip Blank	Groundwater	05/24/2013 08:32
S56588.02	MW-12-07	Groundwater	05/24/2013 10:37
S56588.03	P2-MW-02	Groundwater	05/24/2013 11:39

Analytical Laboratory Report

Lab Sample ID: S56588.01
Sample Tag: Trip Blank
Collected Date/Time: 05/24/2013 08:32
Matrix: Groundwater
COC Reference: 74251

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/31/13 10:26	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 16:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 16:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 16:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 16:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 16:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 16:11	WAT		

Lab Sample ID: S56588.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 16:11	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56588.02
Sample Tag: MW-12-07
Collected Date/Time: 05/24/2013 10:37
Matrix: Groundwater
COC Reference: 74251

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/28/13 15:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:04	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 19:04	PER	7440-38-2	
Barium	0.039	mg/L	0.010	SW6020	06/10/13 19:04	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	06/10/13 19:04	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:04	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:04	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:04	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	06/10/13 19:04	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:04	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/10/13 19:04	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:38	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 19:04	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020	06/10/13 19:04	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:04	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:04	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/10/13 19:04	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	91-58-7	

Lab Sample ID: S56588.02 (continued)
Sample Tag: MW-12-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 20:34	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 20:34	PL	118-74-1	

Lab Sample ID: S56588.02 (continued)
Sample Tag: MW-12-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/28/13 20:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 20:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 20:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 20:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 20:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 20:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 20:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	120-82-1	

Lab Sample ID: S56588.02 (continued)
Sample Tag: MW-12-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 20:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56588.03
Sample Tag: P2-MW-02
Collected Date/Time: 05/24/2013 11:39
Matrix: Groundwater
COC Reference: 74251

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/28/13 15:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:06	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	06/10/13 19:06	PER	7440-38-2	
Barium	0.180	mg/L	0.010	SW6020	06/10/13 19:06	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	06/10/13 19:06	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:06	PER	7440-43-9	
Chromium	0.015	mg/L	0.010	SW6020	06/10/13 19:06	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:06	PER	7440-48-4	
Copper	0.013	mg/L	0.002	SW6020	06/10/13 19:06	PER	7440-50-8	
Lead	0.006	mg/L	0.002	SW6020	06/10/13 19:06	PER	7439-92-1	
Manganese	0.317	mg/L	0.010	SW6020	06/10/13 19:06	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:40	CCM	7439-97-6	
Nickel	0.017	mg/L	0.010	SW6020	06/10/13 19:06	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 19:06	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:06	PER	7440-22-4	
Vanadium	0.007	mg/L	0.002	SW6020	06/10/13 19:06	PER	7440-62-2	
Zinc	0.024	mg/L	0.010	SW6020	06/10/13 19:06	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/05/13 21:07	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	85-68-7	

B-Compound also found in associated method blank

Lab Sample ID: S56588.03 (continued)
Sample Tag: P2-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 21:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/05/13 21:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 21:07	PL	118-74-1	

Lab Sample ID: S56588.03 (continued)
Sample Tag: P2-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/28/13 20:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 20:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 20:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 20:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 20:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 20:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 20:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	120-82-1	

Lab Sample ID: S56588.03 (continued)
Sample Tag: P2-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 20:52	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
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C.O.C. PAGE # 1 OF 1

74251

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task# 00803

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 2 Project#: B006447.2013.00003

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villaneal

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (wHg)	1,4 dioxane (SIMS)
56588.01	5/24/13	8:32	Trip blank	GW	2		2						X				
.02	5/24/13	10:37	MW-12-07	GW	6	2	3	1					X	X		X	X
.03	5/24/13	11:39	DUP-MW-02	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME	☒ Sampler	DATE 5/24/13	TIME 15:10
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 5-24-13	TIME 15:10
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE 5-24-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust		DATE 5/24/13	TIME 1520
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL 4.0
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56589.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

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Report Summary

Lab Sample ID(s): S56589.01-S56589.03
Project: Lansing Plant 6 Project# B0064481.2013.00603
Collected Date: 05/24/2013
Submitted Date/Time: 05/24/2013 15:30
Sampled by: Unknown
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56589.01	MW-12-15	Groundwater	05/24/2013 10:23
S56589.02	FB-1	Liquid	05/24/2013 10:30
S56589.03	Trip Blank	Liquid	05/24/2013 09:00

Analytical Laboratory Report

Lab Sample ID: S56589.01
Sample Tag: MW-12-15
Collected Date/Time: 05/24/2013 10:23
Matrix: Groundwater
COC Reference: 74257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/28/13 15:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:08	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	06/10/13 19:08	PER	7440-38-2	
Barium	0.048	mg/L	0.010	SW6020	06/10/13 19:08	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	06/10/13 19:08	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:08	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:08	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:08	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 19:08	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:08	PER	7439-92-1	
Manganese	0.020	mg/L	0.010	SW6020	06/10/13 19:08	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:42	CCM	7439-97-6	
Nickel	0.010	mg/L	0.010	SW6020	06/10/13 19:08	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 19:08	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:08	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:08	PER	7440-62-2	
Zinc	0.023	mg/L	0.010	SW6020	06/10/13 19:08	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	91-58-7	

Lab Sample ID: S56589.01 (continued)
Sample Tag: MW-12-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 21:40	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/05/13 21:40	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 21:40	PL	118-74-1	

Lab Sample ID: S56589.01 (continued)
Sample Tag: MW-12-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/28/13 20:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 21:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 21:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 21:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 21:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 21:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 21:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	120-82-1	

Lab Sample ID: S56589.01 (continued)
Sample Tag: MW-12-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 21:12	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56589.02
Sample Tag: FB-1
Collected Date/Time: 05/24/2013 10:30
Matrix: Liquid
COC Reference: 74257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/30/13 21:02	EMR		
pH check for VOCs	<2	STD Units		N/A	05/31/13 10:26	WAT		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 22:14	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	117-81-7	

Lab Sample ID: S56589.02 (continued)
Sample Tag: FB-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 22:14	PL	118-74-1	
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 16:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 16:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 16:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	71-55-6	

Lab Sample ID: S56589.02 (continued)
Sample Tag: FB-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 16:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 16:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 16:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 16:31	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56589.03
Sample Tag: Trip Blank
Collected Date/Time: 05/24/2013 09:00
Matrix: Liquid
COC Reference: 74257

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/31/13 10:26	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 16:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 16:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 16:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 16:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 16:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 16:51	WAT		

Lab Sample ID: S56589.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 16:51	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74257

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task#00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448 1.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (wHg) 1-4 Digest (Sums)		
56589.01	5/24	1023	MW-12-15	GW	6	2	3	1					X	X		X	X	
.02	5/24	1030	FB-1	L	5	2	3						X	X		[redacted]	[redacted]	
.03	5/24	0900	TRIP Blank	L	2		2						X	[redacted]				

RELINQUISHED BY: SIGNATURE/ORGANIZATION [signature] Sampler DATE 5/24/13 TIME 1444
RECEIVED BY: SIGNATURE/ORGANIZATION [signature] DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION [signature] DATE 5-24-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tabatha Faust DATE 5-24-13 TIME 1530

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION [signature] DATE 5-24-13 TIME 1500

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56603.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56603.01-S56603.02
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 05/28/2013
Submitted Date/Time: 05/29/2013 09:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56603.01	MW-03-01	Groundwater	05/28/2013 11:50
S56603.02	Trip Blank	Liquid	05/28/2013 10:30

Analytical Laboratory Report

Lab Sample ID: S56603.01
Sample Tag: MW-03-01
Collected Date/Time: 05/28/2013 11:50
Matrix: Groundwater
COC Reference: 74256

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/29/13 14:35	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:24	PER	7440-36-0	
Arsenic	0.019	mg/L	0.002	SW6020	06/10/13 19:24	PER	7440-38-2	
Barium	0.396	mg/L	0.010	SW6020	06/10/13 19:24	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 19:24	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:24	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:24	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:24	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	06/10/13 19:24	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:24	PER	7439-92-1	
Manganese	0.281	mg/L	0.010	SW6020	06/10/13 19:24	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/30/13 15:06	CCM	7439-97-6	
Nickel	0.032	mg/L	0.010	SW6020	06/10/13 19:24	PER	7440-02-0	
Selenium	0.007	mg/L	0.005	SW6020	06/10/13 19:24	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:24	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:24	PER	7440-62-2	
Zinc	0.020	mg/L	0.010	SW6020	06/10/13 19:24	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	91-58-7	

Lab Sample ID: S56603.01 (continued)
Sample Tag: MW-03-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 15:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/05/13 15:00	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 15:00	PL	118-74-1	

Lab Sample ID: S56603.01 (continued)
Sample Tag: MW-03-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/29/13 15:04	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 21:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 21:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 21:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 21:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 21:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 21:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	120-82-1	

Lab Sample ID: S56603.01 (continued)
Sample Tag: MW-03-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 21:52	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56603.02
Sample Tag: Trip Blank
Collected Date/Time: 05/28/2013 10:30
Matrix: Liquid
COC Reference: 74256

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/31/13 10:26	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 17:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 17:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 17:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 17:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 17:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 17:31	WAT		

Lab Sample ID: S56603.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 17:31	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74256

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task#00603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448.01.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	Hardness (SDWS)
56603.01	5/28/13	1150	MW-03-01	GW	6	2	3	1					X	X		X	X
.02	5/28/13	1030	TRIP BLANK	L	1		1						X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 5/28/13	TIME 1200
RECEIVED BY: SIGNATURE/ORGANIZATION	Fm Storage	DATE 5/28/13	TIME 1800
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 5/29/13	TIME 845

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 5/29/13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabitha Faust	DATE 5/29/13	TIME 930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.1
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56604.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

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Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56604.01-S56604.05
Project: Lansing Plant 3 Project# B0064480.2013.00603
Collected Date: 05/28/2013
Submitted Date/Time: 05/29/2013 09:30
Sampled by: Joseph Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56604.01	Trip Blank	Liquid	05/28/2013 00:01
S56604.02	MW-02-02 (3)	Groundwater	05/28/2013 11:52
S56604.03	MW-02-02 (3) MS	Groundwater	05/28/2013 11:52
S56604.04	MW-02-02 (3) MSD	Groundwater	05/28/2013 11:52
S56604.05	MW-13-30	Groundwater	05/28/2013 17:02

Analytical Laboratory Report

Lab Sample ID: S56604.01
Sample Tag: Trip Blank
Collected Date/Time: 05/28/2013 00:01
Matrix: Liquid
COC Reference: 74243

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/04/13 10:44	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/03/13 16:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/03/13 16:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/03/13 16:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/03/13 16:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/03/13 16:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/03/13 16:04	WAT		

Lab Sample ID: S56604.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/03/13 16:04	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56604.02
Sample Tag: MW-02-02 (3)
Collected Date/Time: 05/28/2013 11:52
Matrix: Groundwater
COC Reference: 74243

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/29/13 14:35	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	05/29/13 10:20	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 18:28	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	06/10/13 18:28	PER	7440-38-2	
Barium	0.063	mg/L	0.010	SW6020	06/10/13 18:28	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	06/10/13 18:28	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 18:28	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 18:28	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 18:28	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 18:28	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 18:28	PER	7439-92-1	
Manganese	2.13	mg/L	0.010	SW6020	06/10/13 18:28	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/30/13 15:30	CCM	7439-97-6	
Nickel	0.033	mg/L	0.010	SW6020	06/10/13 18:28	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 18:28	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 18:28	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 18:28	PER	7440-62-2	
Zinc	0.032	mg/L	0.010	SW6020	06/10/13 18:28	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	205-99-2	

Lab Sample ID: S56604.02 (continued)
Sample Tag: MW-02-02 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 15:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	129-00-0	

Lab Sample ID: S56604.02 (continued)
Sample Tag: MW-02-02 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 15:33	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/29/13 15:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/03/13 15:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/03/13 15:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/03/13 15:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/03/13 15:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/03/13 15:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/03/13 15:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	100-42-5	

Lab Sample ID: S56604.02 (continued)
Sample Tag: MW-02-02 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/03/13 15:44	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56604.03
Sample Tag: MW-02-02 (3) MS
Collected Date/Time: 05/28/2013 11:52
Matrix: Groundwater
COC Reference: 74243

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/29/13 14:35	WAT		
Inorganics								
Chromium VI	0.119	mg/L	0.01	3500-Cr B	05/29/13 10:30	JKB	18540-29-9	I
Metals								
Antimony	0.265	mg/L	0.002	SW6020	06/10/13 18:36	PER	7440-36-0	
Arsenic	0.270	mg/L	0.002	SW6020	06/10/13 18:36	PER	7440-38-2	
Barium	0.320	mg/L	0.010	SW6020	06/10/13 18:36	PER	7440-39-3	
Boron	0.28	mg/L	0.04	SW6020	06/10/13 18:36	PER	7440-42-8	
Cadmium	0.252	mg/L	0.0010	SW6020	06/10/13 18:36	PER	7440-43-9	
Chromium	0.256	mg/L	0.010	SW6020	06/10/13 18:36	PER	7440-47-3	
Cobalt	0.254	mg/L	0.010	SW6020	06/10/13 18:36	PER	7440-48-4	
Copper	0.233	mg/L	0.002	SW6020	06/10/13 18:36	PER	7440-50-8	
Lead	0.232	mg/L	0.002	SW6020	06/10/13 18:36	PER	7439-92-1	
Manganese	2.33	mg/L	0.010	SW6020	06/10/13 18:36	PER	7439-96-5	
Mercury	0.0019	mg/L	0.0001	SW7471A	05/30/13 15:32	CCM	7439-97-6	
Nickel	0.263	mg/L	0.010	SW6020	06/10/13 18:36	PER	7440-02-0	
Selenium	0.282	mg/L	0.005	SW6020	06/10/13 18:36	PER	7782-49-2	
Silver	0.230	mg/L	0.0005	SW6020	06/10/13 18:36	PER	7440-22-4	
Vanadium	0.259	mg/L	0.002	SW6020	06/10/13 18:36	PER	7440-62-2	
Zinc	0.247	mg/L	0.010	SW6020	06/10/13 18:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	41	ug/L	1	SW8270C	06/05/13 16:07	PL	83-32-9	1
Acenaphthylene	38	ug/L	1	SW8270C	06/05/13 16:07	PL	208-96-8	1
Acetophenone	27	ug/L	1	SW8270C	06/05/13 16:07	PL	98-86-2	1
Anthracene	46	ug/L	1	SW8270C	06/05/13 16:07	PL	120-12-7	1
Atrazine	43	ug/L	1	SW8270C	06/05/13 16:07	PL	1912-24-9	1
1,1'-Biphenyl	32	ug/L	1	SW8270C	06/05/13 16:07	PL	92-52-4	1
4-Bromophenyl phenyl ether	38	ug/L	1	SW8270C	06/05/13 16:07	PL	101-55-3	1
di-n-Butyl phthalate	47	ug/L	1	SW8270C	06/05/13 16:07	PL	84-74-2	1
Benzaldehyde	25	ug/L	1	SW8270C	06/05/13 16:07	PL	100-52-7	1
Benzo(a)anthracene	44	ug/L	1	SW8270C	06/05/13 16:07	PL	56-55-3	1

I-Matrix interference with internal standard
1-Sample spiked at 50 mg/l

Lab Sample ID: S56604.03 (continued)
Sample Tag: MW-02-02 (3) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(a)pyrene	44	ug/L	1	SW8270C	06/05/13 16:07	PL	50-32-8	1
Benzo(b)fluoranthene	44	ug/L	1	SW8270C	06/05/13 16:07	PL	205-99-2	1
Benzo(ghi)perylene	31	ug/L	1	SW8270C	06/05/13 16:07	PL	191-24-2	1
Benzo(k)fluoranthene	43	ug/L	1	SW8270C	06/05/13 16:07	PL	207-08-9	1
Butyl benzyl phthalate	46	ug/L	1	SW8270C	06/05/13 16:07	PL	85-68-7	1
2-Chloronaphthalene	31	ug/L	1	SW8270C	06/05/13 16:07	PL	91-58-7	1
2-Chlorophenol	26	ug/L	1	SW8270C	06/05/13 16:07	PL	95-57-8	1
4-Chloro-3-methylphenol	36	ug/L	1	SW8270C	06/05/13 16:07	PL	59-50-7	1
4-Chloroaniline	29	ug/L	1	SW8270C	06/05/13 16:07	PL	106-47-8	1
4-Chlorophenyl phenyl ether	38	ug/L	1	SW8270C	06/05/13 16:07	PL	7005-72-3	1
Caprolactam	5	ug/L	1	SW8270C	06/05/13 16:07	PL	105-60-2	1
Carbazole	42	ug/L	1	SW8270C	06/05/13 16:07	PL	86-74-8	1
bis(2-Chloroethoxy)methane	31	ug/L	1	SW8270C	06/05/13 16:07	PL	111-91-1	1
bis(2-Chloroethyl)ether	25	ug/L	1	SW8270C	06/05/13 16:07	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	25	ug/L	1	SW8270C	06/05/13 16:07	PL	108-60-1	1
Chrysene	49	ug/L	1	SW8270C	06/05/13 16:07	PL	218-01-9	1
2,4-Dichlorophenol	32	ug/L	1	SW8270C	06/05/13 16:07	PL	120-83-2	1
2,4-Dimethylphenol	34	ug/L	1	SW8270C	06/05/13 16:07	PL	105-67-9	1
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 16:07	PL	51-28-5	1
2,4-Dinitrotoluene	39	ug/L	1	SW8270C	06/05/13 16:07	PL	121-14-2	1
2,6-Dinitrotoluene	37	ug/L	1	SW8270C	06/05/13 16:07	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	7	ug/L	1	SW8270C	06/05/13 16:07	PL	534-52-1	1
Dibenzo(ah)anthracene	33	ug/L	2	SW8270C	06/05/13 16:07	PL	53-70-3	1
Dibenzofuran	42	ug/L	1	SW8270C	06/05/13 16:07	PL	132-64-9	1
Diethyl phthalate	44	ug/L	1	SW8270C	06/05/13 16:07	PL	84-66-2	1
Dimethyl phthalate	39	ug/L	1	SW8270C	06/05/13 16:07	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	49	ug/L	1	SW8270C	06/05/13 16:07	PL	117-81-7	1
Fluoranthene	44	ug/L	1	SW8270C	06/05/13 16:07	PL	206-44-0	1
Fluorene	42	ug/L	1	SW8270C	06/05/13 16:07	PL	86-73-7	1
Hexachlorobutadiene	23	ug/L	1	SW8270C	06/05/13 16:07	PL	87-68-3	1
Hexachlorocyclopentadiene	30	ug/L	1	SW8270C	06/05/13 16:07	PL	77-47-4	1
Hexachloroethane	20	ug/L	1	SW8270C	06/05/13 16:07	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	33	ug/L	1	SW8270C	06/05/13 16:07	PL	193-39-5	1
Isophorone	42	ug/L	1	SW8270C	06/05/13 16:07	PL	78-59-1	1
2-Methylnaphthalene	33	ug/L	1	SW8270C	06/05/13 16:07	PL	91-57-6	1
2-Methylphenol	29	ug/L	1	SW8270C	06/05/13 16:07	PL	95-48-7	1
3-, 4-Methylphenol	31	ug/L	1	SW8270C	06/05/13 16:07	PL	3/4-Cresol	1
2-Nitroaniline	37	ug/L	1	SW8270C	06/05/13 16:07	PL	88-74-4	1
2-Nitrophenol	29	ug/L	1	SW8270C	06/05/13 16:07	PL	88-75-5	1
3-Nitroaniline	36	ug/L	1	SW8270C	06/05/13 16:07	PL	99-09-2	1
4-Nitroaniline	35	ug/L	1	SW8270C	06/05/13 16:07	PL	100-01-6	1
4-Nitrophenol	22	ug/L	1	SW8270C	06/05/13 16:07	PL	100-02-7	1
N-Nitrosodi-n-propylamine	30	ug/L	1	SW8270C	06/05/13 16:07	PL	621-64-7	1
N-Nitrosodiphenylamine	38	ug/L	1	SW8270C	06/05/13 16:07	PL	86-30-6	1
Naphthalene	31	ug/L	1	SW8270C	06/05/13 16:07	PL	91-20-3	1
Nitrobenzene	26	ug/L	1	SW8270C	06/05/13 16:07	PL	98-95-3	1
di-n-Octyl phthalate	43	ug/L	1	SW8270C	06/05/13 16:07	PL	117-84-0	1
Pentachlorophenol	33	ug/L	1	SW8270C	06/05/13 16:07	PL	87-86-5	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S56604.03 (continued)
Sample Tag: MW-02-02 (3) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenanthrene	44	ug/L	1	SW8270C	06/05/13 16:07	PL	85-01-8	1
Phenol	21	ug/L	1	SW8270C	06/05/13 16:07	PL	108-95-2	1
Pyrene	46	ug/L	1	SW8270C	06/05/13 16:07	PL	129-00-0	1
2,4,5-Trichlorophenol	36	ug/L	1	SW8270C	06/05/13 16:07	PL	95-95-4	1
2,4,6-Trichlorophenol	33	ug/L	1	SW8270C	06/05/13 16:07	PL	88-06-2	1
Hexachlorobenzene	42	ug/L	1	SW8270C	06/05/13 16:07	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	44	ug/L	5	SW8260B - SIM	05/29/13 19:07	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	53	ug/L	1	SW8260B	06/03/13 13:43	WAT	76-13-1	2
Acetone	49	ug/L	10	SW8260B	06/03/13 13:43	WAT	67-64-1	2
Carbon disulfide	48	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-15-0	2
Methyl Acetate	80	ug/L	10	SW8260B	06/03/13 13:43	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	51	ug/L	1	SW8260B	06/03/13 13:43	WAT	1634-04-4	2
2-Butanone (MEK)	51	ug/L	10	SW8260B	06/03/13 13:43	WAT	78-93-3	2
Dichlorodifluoromethane	28	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-71-8	2
Chloromethane	42	ug/L	1	SW8260B	06/03/13 13:43	WAT	74-87-3	2
Vinyl chloride	47	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-01-4	2
Bromomethane	38	ug/L	1	SW8260B	06/03/13 13:43	WAT	74-83-9	2
Chloroethane	39	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-00-3	2
Trichlorofluoromethane	51	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-69-4	2
1,1-Dichloroethene	49	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-35-4	2
Methylene chloride	50	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	06/03/13 13:43	WAT	156-60-5	2
1,1-Dichloroethane	52	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-34-3	2
cis-1,2-Dichloroethene	52	ug/L	1	SW8260B	06/03/13 13:43	WAT	156-59-2	2
Chloroform	52	ug/L	1	SW8260B	06/03/13 13:43	WAT	67-66-3	2
1,1,1-Trichloroethane	52	ug/L	1	SW8260B	06/03/13 13:43	WAT	71-55-6	2
Cyclohexane	51	ug/L	1	SW8260B	06/03/13 13:43	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	54	ug/L	10	SW8260B	06/03/13 13:43	WAT	108-10-1	2
2-Hexanone	54	ug/L	10	SW8260B	06/03/13 13:43	WAT	591-78-6	2
Carbon tetrachloride	52	ug/L	1	SW8260B	06/03/13 13:43	WAT	56-23-5	2
Benzene	53	ug/L	1	SW8260B	06/03/13 13:43	WAT	71-43-2	2
1,2-Dichloroethane	53	ug/L	1	SW8260B	06/03/13 13:43	WAT	107-06-2	2
Trichloroethene	51	ug/L	1	SW8260B	06/03/13 13:43	WAT	79-01-6	2
1,2-Dichloropropane	55	ug/L	1	SW8260B	06/03/13 13:43	WAT	78-87-5	2
Bromodichloromethane	54	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-27-4	2
Methyl cyclohexane	49	ug/L	1	SW8260B	06/03/13 13:43	WAT	108-87-2	2
cis-1,3-Dichloropropene	53	ug/L	1	SW8260B	06/03/13 13:43	WAT	10061-01-5	2
Toluene	53	ug/L	1	SW8260B	06/03/13 13:43	WAT	108-88-3	2
trans-1,3-Dichloropropene	52	ug/L	1	SW8260B	06/03/13 13:43	WAT	10061-02-6	2
1,1,2-Trichloroethane	55	ug/L	1	SW8260B	06/03/13 13:43	WAT	79-00-5	2
Tetrachloroethene	46	ug/L	1	SW8260B	06/03/13 13:43	WAT	127-18-4	2
Dibromochloromethane	48	ug/L	1	SW8260B	06/03/13 13:43	WAT	124-48-1	2
Chlorobenzene	51	ug/L	1	SW8260B	06/03/13 13:43	WAT	108-90-7	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56604.03 (continued)
Sample Tag: MW-02-02 (3) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	56	ug/L	1	SW8260B	06/03/13 13:43	WAT	79-34-5	1
Ethylbenzene	53	ug/L	1	SW8260B	06/03/13 13:43	WAT	100-41-4	1
p,m-Xylene	104	ug/L	2	SW8260B	06/03/13 13:43	WAT		1
o-Xylene	54	ug/L	1	SW8260B	06/03/13 13:43	WAT	95-47-6	1
Styrene	38	ug/L	1	SW8260B	06/03/13 13:43	WAT	100-42-5	1
Isopropylbenzene	51	ug/L	1	SW8260B	06/03/13 13:43	WAT	98-82-8	1
Bromoform	48	ug/L	1	SW8260B	06/03/13 13:43	WAT	75-25-2	1
1,3-Dichlorobenzene	52	ug/L	1	SW8260B	06/03/13 13:43	WAT	541-73-1	1
1,4-Dichlorobenzene	51	ug/L	1	SW8260B	06/03/13 13:43	WAT	106-46-7	1
1,2-Dichlorobenzene	50	ug/L	1	SW8260B	06/03/13 13:43	WAT	95-50-1	1
1,2,4-Trichlorobenzene	50	ug/L	1	SW8260B	06/03/13 13:43	WAT	120-82-1	1
1,2-Dibromoethane	54	ug/L	1	SW8260B	06/03/13 13:43	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	49	ug/L	1	SW8260B	06/03/13 13:43	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S56604.04
Sample Tag: MW-02-02 (3) MSD
Collected Date/Time: 05/28/2013 11:52
Matrix: Groundwater
COC Reference: 74243

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/29/13 14:35	WAT		
Inorganics								
Chromium VI	0.126	mg/L	0.01	3500-Cr B	05/29/13 10:35	JKB	18540-29-9	I
Metals								
Antimony	0.262	mg/L	0.002	SW6020	06/10/13 18:39	PER	7440-36-0	
Arsenic	0.268	mg/L	0.002	SW6020	06/10/13 18:39	PER	7440-38-2	
Barium	0.315	mg/L	0.010	SW6020	06/10/13 18:39	PER	7440-39-3	
Boron	0.28	mg/L	0.04	SW6020	06/10/13 18:39	PER	7440-42-8	
Cadmium	0.250	mg/L	0.0010	SW6020	06/10/13 18:39	PER	7440-43-9	
Chromium	0.254	mg/L	0.010	SW6020	06/10/13 18:39	PER	7440-47-3	
Cobalt	0.257	mg/L	0.010	SW6020	06/10/13 18:39	PER	7440-48-4	
Copper	0.235	mg/L	0.002	SW6020	06/10/13 18:39	PER	7440-50-8	
Lead	0.228	mg/L	0.002	SW6020	06/10/13 18:39	PER	7439-92-1	
Manganese	2.39	mg/L	0.010	SW6020	06/10/13 18:39	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	05/30/13 15:34	CCM	7439-97-6	
Nickel	0.269	mg/L	0.010	SW6020	06/10/13 18:39	PER	7440-02-0	
Selenium	0.273	mg/L	0.005	SW6020	06/10/13 18:39	PER	7782-49-2	
Silver	0.232	mg/L	0.0005	SW6020	06/10/13 18:39	PER	7440-22-4	
Vanadium	0.260	mg/L	0.002	SW6020	06/10/13 18:39	PER	7440-62-2	
Zinc	0.244	mg/L	0.010	SW6020	06/10/13 18:39	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	24	ug/L	1	SW8270C	06/05/13 16:41	PL	83-32-9	1
Acenaphthylene	23	ug/L	1	SW8270C	06/05/13 16:41	PL	208-96-8	1
Acetophenone	20	ug/L	1	SW8270C	06/05/13 16:41	PL	98-86-2	1
Anthracene	36	ug/L	1	SW8270C	06/05/13 16:41	PL	120-12-7	1
Atrazine	34	ug/L	1	SW8270C	06/05/13 16:41	PL	1912-24-9	1
1,1'-Biphenyl	16	ug/L	1	SW8270C	06/05/13 16:41	PL	92-52-4	1
4-Bromophenyl phenyl ether	28	ug/L	1	SW8270C	06/05/13 16:41	PL	101-55-3	1
di-n-Butyl phthalate	40	ug/L	1	SW8270C	06/05/13 16:41	PL	84-74-2	1
Benzaldehyde	16	ug/L	1	SW8270C	06/05/13 16:41	PL	100-52-7	1
Benzo(a)anthracene	37	ug/L	1	SW8270C	06/05/13 16:41	PL	56-55-3	1

I-Matrix interference with internal standard
1-Sample spiked at 50 mg/l

Lab Sample ID: S56604.04 (continued)
Sample Tag: MW-02-02 (3) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(a)pyrene	37	ug/L	1	SW8270C	06/05/13 16:41	PL	50-32-8	1
Benzo(b)fluoranthene	38	ug/L	1	SW8270C	06/05/13 16:41	PL	205-99-2	1
Benzo(ghi)perylene	26	ug/L	1	SW8270C	06/05/13 16:41	PL	191-24-2	1
Benzo(k)fluoranthene	35	ug/L	1	SW8270C	06/05/13 16:41	PL	207-08-9	1
Butyl benzyl phthalate	39	ug/L	1	SW8270C	06/05/13 16:41	PL	85-68-7	1
2-Chloronaphthalene	16	ug/L	1	SW8270C	06/05/13 16:41	PL	91-58-7	1
2-Chlorophenol	20	ug/L	1	SW8270C	06/05/13 16:41	PL	95-57-8	1
4-Chloro-3-methylphenol	27	ug/L	1	SW8270C	06/05/13 16:41	PL	59-50-7	1
4-Chloroaniline	19	ug/L	1	SW8270C	06/05/13 16:41	PL	106-47-8	1
4-Chlorophenyl phenyl ether	25	ug/L	1	SW8270C	06/05/13 16:41	PL	7005-72-3	1
Caprolactam	3	ug/L	1	SW8270C	06/05/13 16:41	PL	105-60-2	1
Carbazole	35	ug/L	1	SW8270C	06/05/13 16:41	PL	86-74-8	1
bis(2-Chloroethoxy)methane	23	ug/L	1	SW8270C	06/05/13 16:41	PL	111-91-1	1
bis(2-Chloroethyl)ether	17	ug/L	1	SW8270C	06/05/13 16:41	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	13	ug/L	1	SW8270C	06/05/13 16:41	PL	108-60-1	1
Chrysene	42	ug/L	1	SW8270C	06/05/13 16:41	PL	218-01-9	1
2,4-Dichlorophenol	23	ug/L	1	SW8270C	06/05/13 16:41	PL	120-83-2	1
2,4-Dimethylphenol	26	ug/L	1	SW8270C	06/05/13 16:41	PL	105-67-9	1
2,4-Dinitrophenol	18	ug/L	1	SW8270C	06/05/13 16:41	PL	51-28-5	1
2,4-Dinitrotoluene	31	ug/L	1	SW8270C	06/05/13 16:41	PL	121-14-2	1
2,6-Dinitrotoluene	28	ug/L	1	SW8270C	06/05/13 16:41	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	27	ug/L	1	SW8270C	06/05/13 16:41	PL	534-52-1	1
Dibenzo(ah)anthracene	27	ug/L	2	SW8270C	06/05/13 16:41	PL	53-70-3	1
Dibenzofuran	27	ug/L	1	SW8270C	06/05/13 16:41	PL	132-64-9	1
Diethyl phthalate	35	ug/L	1	SW8270C	06/05/13 16:41	PL	84-66-2	1
Dimethyl phthalate	30	ug/L	1	SW8270C	06/05/13 16:41	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	42	ug/L	1	SW8270C	06/05/13 16:41	PL	117-81-7	1
Fluoranthene	36	ug/L	1	SW8270C	06/05/13 16:41	PL	206-44-0	1
Fluorene	30	ug/L	1	SW8270C	06/05/13 16:41	PL	86-73-7	1
Hexachlorobutadiene	6	ug/L	1	SW8270C	06/05/13 16:41	PL	87-68-3	1
Hexachlorocyclopentadiene	8	ug/L	1	SW8270C	06/05/13 16:41	PL	77-47-4	1
Hexachloroethane	5	ug/L	1	SW8270C	06/05/13 16:41	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	28	ug/L	1	SW8270C	06/05/13 16:41	PL	193-39-5	1
Isophorone	31	ug/L	1	SW8270C	06/05/13 16:41	PL	78-59-1	1
2-Methylnaphthalene	15	ug/L	1	SW8270C	06/05/13 16:41	PL	91-57-6	1
2-Methylphenol	23	ug/L	1	SW8270C	06/05/13 16:41	PL	95-48-7	1
3-, 4-Methylphenol	25	ug/L	1	SW8270C	06/05/13 16:41	PL	3/4-Cresol	1
2-Nitroaniline	29	ug/L	1	SW8270C	06/05/13 16:41	PL	88-74-4	1
2-Nitrophenol	20	ug/L	1	SW8270C	06/05/13 16:41	PL	88-75-5	1
3-Nitroaniline	26	ug/L	1	SW8270C	06/05/13 16:41	PL	99-09-2	1
4-Nitroaniline	27	ug/L	1	SW8270C	06/05/13 16:41	PL	100-01-6	1
4-Nitrophenol	21	ug/L	1	SW8270C	06/05/13 16:41	PL	100-02-7	1
N-Nitrosodi-n-propylamine	22	ug/L	1	SW8270C	06/05/13 16:41	PL	621-64-7	1
N-Nitrosodiphenylamine	31	ug/L	1	SW8270C	06/05/13 16:41	PL	86-30-6	1
Naphthalene	14	ug/L	1	SW8270C	06/05/13 16:41	PL	91-20-3	1
Nitrobenzene	17	ug/L	1	SW8270C	06/05/13 16:41	PL	98-95-3	1
di-n-Octyl phthalate	36	ug/L	1	SW8270C	06/05/13 16:41	PL	117-84-0	1
Pentachlorophenol	30	ug/L	1	SW8270C	06/05/13 16:41	PL	87-86-5	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S56604.04 (continued)
Sample Tag: MW-02-02 (3) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenanthrene	35	ug/L	1	SW8270C	06/05/13 16:41	PL	85-01-8	1
Phenol	18	ug/L	1	SW8270C	06/05/13 16:41	PL	108-95-2	1
Pyrene	39	ug/L	1	SW8270C	06/05/13 16:41	PL	129-00-0	1
2,4,5-Trichlorophenol	25	ug/L	1	SW8270C	06/05/13 16:41	PL	95-95-4	1
2,4,6-Trichlorophenol	22	ug/L	1	SW8270C	06/05/13 16:41	PL	88-06-2	1
Hexachlorobenzene	33	ug/L	1	SW8270C	06/05/13 16:41	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	45	ug/L	5	SW8260B - SIM	05/29/13 19:29	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	53	ug/L	1	SW8260B	06/03/13 14:03	WAT	76-13-1	2
Acetone	55	ug/L	10	SW8260B	06/03/13 14:03	WAT	67-64-1	2
Carbon disulfide	37	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-15-0	2
Methyl Acetate	63	ug/L	10	SW8260B	06/03/13 14:03	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	55	ug/L	1	SW8260B	06/03/13 14:03	WAT	1634-04-4	2
2-Butanone (MEK)	53	ug/L	10	SW8260B	06/03/13 14:03	WAT	78-93-3	2
Dichlorodifluoromethane	30	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-71-8	2
Chloromethane	44	ug/L	1	SW8260B	06/03/13 14:03	WAT	74-87-3	2
Vinyl chloride	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-01-4	2
Bromomethane	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	74-83-9	2
Chloroethane	55	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-00-3	2
Trichlorofluoromethane	54	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-69-4	2
1,1-Dichloroethene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-35-4	2
Methylene chloride	51	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	156-60-5	2
1,1-Dichloroethane	52	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-34-3	2
cis-1,2-Dichloroethene	52	ug/L	1	SW8260B	06/03/13 14:03	WAT	156-59-2	2
Chloroform	53	ug/L	1	SW8260B	06/03/13 14:03	WAT	67-66-3	2
1,1,1-Trichloroethane	54	ug/L	1	SW8260B	06/03/13 14:03	WAT	71-55-6	2
Cyclohexane	51	ug/L	1	SW8260B	06/03/13 14:03	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	60	ug/L	10	SW8260B	06/03/13 14:03	WAT	108-10-1	2
2-Hexanone	61	ug/L	10	SW8260B	06/03/13 14:03	WAT	591-78-6	2
Carbon tetrachloride	52	ug/L	1	SW8260B	06/03/13 14:03	WAT	56-23-5	2
Benzene	54	ug/L	1	SW8260B	06/03/13 14:03	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260B	06/03/13 14:03	WAT	107-06-2	2
Trichloroethene	52	ug/L	1	SW8260B	06/03/13 14:03	WAT	79-01-6	2
1,2-Dichloropropane	55	ug/L	1	SW8260B	06/03/13 14:03	WAT	78-87-5	2
Bromodichloromethane	55	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-27-4	2
Methyl cyclohexane	48	ug/L	1	SW8260B	06/03/13 14:03	WAT	108-87-2	2
cis-1,3-Dichloropropene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	10061-01-5	2
Toluene	53	ug/L	1	SW8260B	06/03/13 14:03	WAT	108-88-3	2
trans-1,3-Dichloropropene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	10061-02-6	2
1,1,2-Trichloroethane	58	ug/L	1	SW8260B	06/03/13 14:03	WAT	79-00-5	2
Tetrachloroethene	48	ug/L	1	SW8260B	06/03/13 14:03	WAT	127-18-4	2
Dibromochloromethane	47	ug/L	1	SW8260B	06/03/13 14:03	WAT	124-48-1	2
Chlorobenzene	51	ug/L	1	SW8260B	06/03/13 14:03	WAT	108-90-7	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56604.04 (continued)
Sample Tag: MW-02-02 (3) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	60	ug/L	1	SW8260B	06/03/13 14:03	WAT	79-34-5	1
Ethylbenzene	52	ug/L	1	SW8260B	06/03/13 14:03	WAT	100-41-4	1
p,m-Xylene	97	ug/L	2	SW8260B	06/03/13 14:03	WAT		1
o-Xylene	51	ug/L	1	SW8260B	06/03/13 14:03	WAT	95-47-6	1
Styrene	26	ug/L	1	SW8260B	06/03/13 14:03	WAT	100-42-5	1
Isopropylbenzene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	98-82-8	1
Bromoform	46	ug/L	1	SW8260B	06/03/13 14:03	WAT	75-25-2	1
1,3-Dichlorobenzene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	541-73-1	1
1,4-Dichlorobenzene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	106-46-7	1
1,2-Dichlorobenzene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	95-50-1	1
1,2,4-Trichlorobenzene	50	ug/L	1	SW8260B	06/03/13 14:03	WAT	120-82-1	1
1,2-Dibromoethane	55	ug/L	1	SW8260B	06/03/13 14:03	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	51	ug/L	1	SW8260B	06/03/13 14:03	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S56604.05
Sample Tag: MW-13-30
Collected Date/Time: 05/28/2013 17:02
Matrix: Groundwater
COC Reference: 74243

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/29/13 14:35	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:17	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	06/10/13 19:17	PER	7440-38-2	
Barium	0.046	mg/L	0.010	SW6020	06/10/13 19:17	PER	7440-39-3	
Boron	0.19	mg/L	0.04	SW6020	06/10/13 19:17	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:17	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:17	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:17	PER	7440-48-4	
Copper	0.002	mg/L	0.002	SW6020	06/10/13 19:17	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:17	PER	7439-92-1	
Manganese	0.959	mg/L	0.010	SW6020	06/10/13 19:17	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/30/13 15:18	CCM	7439-97-6	
Nickel	0.046	mg/L	0.010	SW6020	06/10/13 19:17	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 19:17	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:17	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:17	PER	7440-62-2	
Zinc	0.035	mg/L	0.010	SW6020	06/10/13 19:17	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/05/13 17:14	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	91-58-7	

Lab Sample ID: S56604.05 (continued)
Sample Tag: MW-13-30

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 17:14	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 17:14	PL	118-74-1	

Lab Sample ID: S56604.05 (continued)
Sample Tag: MW-13-30

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/29/13 15:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/04/13 16:37	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/04/13 16:37	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/04/13 16:37	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/04/13 16:37	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/04/13 16:37	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/04/13 16:37	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	120-82-1	

Lab Sample ID: S56604.05 (continued)
Sample Tag: MW-13-30

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/04/13 16:37	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74243

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task# 00803

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.2013.00803
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joseph Rumschlag

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1,4-Dioxane 8260 SIM	Hexavalent Chromium					Special Instructions
566011.01	5/28/13	—	Trip Blank	L	2		X						X										
.02	5/28/13	1152	MW-02-02 (3)	GW	21	18 3rd	9	3					X	X		X	X	X					MS/MSD + 24-hr hold
.03																							
.04																							
.05	5/28/13	1702	MW-13-30	GW	6	2	3	1					X	X		X	X						on hexavalent chromium +

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Joseph Rumschlag ☒ Sampler — DATE: 5/28/13 TIME: 18:00
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: 5/28/13 TIME: 1800

RELINQUISHED BY: SIGNATURE/ORGANIZATION: — DATE: 5/28/13 TIME: 2000
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: 5/28/13 TIME: 2000

RELINQUISHED BY: SIGNATURE/ORGANIZATION: — DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: 5-29-13 TIME: 845

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 6.1
5/29/13 930

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56605.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56605.01-S56605.04
Project: Lansing Plant 3 Project# B0064480.2013.00603
Collected Date: 05/28/2013
Submitted Date/Time: 05/29/2013 09:30
Sampled by: Robert Prigge
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56605.01	P3-SB-07	Groundwater	05/28/2013 11:45
S56605.02	EB-5	Water	05/28/2013 14:10
S56605.03	MW-13-25	Groundwater	05/28/2013 16:30
S56605.04	Trip Blank	Water	05/28/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56605.01
Sample Tag: P3-SB-07
Collected Date/Time: 05/28/2013 11:45
Matrix: Groundwater
COC Reference: 74242

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/29/13 14:35	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	05/29/13 10:40	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:19	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 19:19	PER	7440-38-2	
Barium	0.055	mg/L	0.010	SW6020	06/10/13 19:19	PER	7440-39-3	
Boron	0.98	mg/L	0.04	SW6020	06/10/13 19:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:19	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 19:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:19	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/10/13 19:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/30/13 15:20	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 19:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 19:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:19	PER	7440-62-2	
Zinc	0.010	mg/L	0.010	SW6020	06/10/13 19:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	205-99-2	

Lab Sample ID: S56605.01 (continued)
Sample Tag: P3-SB-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 17:48	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	06/05/13 17:48	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	129-00-0	

Lab Sample ID: S56605.01 (continued)
Sample Tag: P3-SB-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 17:48	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/29/13 16:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	76-13-1	
Acetone	11	ug/L	10	SW8260B	05/30/13 22:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 22:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 22:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 22:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 22:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 22:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	100-42-5	

Lab Sample ID: S56605.01 (continued)
Sample Tag: P3-SB-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 22:12	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56605.02
Sample Tag: EB-5
Collected Date/Time: 05/28/2013 14:10
Matrix: Water
COC Reference: 74242

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/29/13 14:35	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	05/29/13 10:45	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:26	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 19:26	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/10/13 19:26	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 19:26	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:26	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:26	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:26	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 19:26	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:26	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/10/13 19:26	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/30/13 15:22	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 19:26	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 19:26	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:26	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:26	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/10/13 19:26	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	205-99-2	

Lab Sample ID: S56605.02 (continued)
Sample Tag: EB-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 18:21	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	129-00-0	

Lab Sample ID: S56605.02 (continued)
Sample Tag: EB-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 18:21	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/29/13 16:32	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 17:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 17:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 17:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 17:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 17:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 17:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	100-42-5	

Lab Sample ID: S56605.02 (continued)
Sample Tag: EB-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 17:51	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56605.03
Sample Tag: MW-13-25
Collected Date/Time: 05/28/2013 16:30
Matrix: Groundwater
COC Reference: 74242

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/29/13 14:50	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:28	PER	7440-36-0	
Arsenic	0.018	mg/L	0.002	SW6020	06/10/13 19:28	PER	7440-38-2	
Barium	0.027	mg/L	0.010	SW6020	06/10/13 19:28	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/10/13 19:28	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:28	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:28	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:28	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 19:28	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:28	PER	7439-92-1	
Manganese	0.816	mg/L	0.010	SW6020	06/10/13 19:28	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/30/13 15:24	CCM	7439-97-6	
Nickel	0.031	mg/L	0.010	SW6020	06/10/13 19:28	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 19:28	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:28	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:28	PER	7440-62-2	
Zinc	0.014	mg/L	0.010	SW6020	06/10/13 19:28	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	91-58-7	

Lab Sample ID: S56605.03 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 18:54	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 18:54	PL	118-74-1	

Lab Sample ID: S56605.03 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	8	ug/L	5	SW8260B - SIM	05/29/13 16:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	76-13-1	
Acetone	12	ug/L	10	SW8260B	05/30/13 22:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 22:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 22:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 22:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 22:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 22:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	120-82-1	

Lab Sample ID: S56605.03 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 22:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56605.04
Sample Tag: Trip Blank
Collected Date/Time: 05/28/2013 00:01
Matrix: Water
COC Reference: 74242

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/31/13 10:31	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 18:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 18:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 18:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 18:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 18:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 18:11	WAT		

Lab Sample ID: S56605.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 18:11	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74242

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO: Task# 00803

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448O.2013. 00803
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Prigge

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs: TCL	SVOCs: TCL	PCBs	Metals (w/Hg): TAL	1,4 dioxane 8260 SIM	hexavalent chromium
56605.01	05/28/13	11:45	P3-SB-07	W	7	X	X	X					3	2		1	3	1
.02	05/28/13	14:10	EB-5	W	7	X	X	X					3	2		1	3	1
.03	05/28/13	16:30	MW-13-25	W	6	X	X	X					3	2		1	3	
.04	05/28/13	--	Trip Blank	W	2		X						2					

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ARCADIS ☒ Sampler — DATE: 05/28/13 TIME: 18:00
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 05/28/13 TIME: 1800

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 5/28/13 TIME: 2000
RECEIVED BY: SIGNATURE/ORGANIZATION: DME S. DATE: 5/29/13 TIME: 2000

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 5/29/13 TIME: 845

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 5.1
5/29/13 930

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56645.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56645.01-S56645.02
Project: Lansing Plant Project# B0064480.2013.00603
Collected Date: 05/30/2013
Submitted Date/Time: 05/31/2013 09:30
Sampled by: Joe Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56645.01	Trip Blank	Liquid	05/30/2013 00:01
S56645.02	MW-22	Groundwater	05/30/2013 15:03

Analytical Laboratory Report

Lab Sample ID: S56645.01
Sample Tag: Trip Blank
Collected Date/Time: 05/30/2013 00:01
Matrix: Liquid
COC Reference: 74244

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 17:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 17:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 17:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 17:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 17:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 17:53	WAT		

Lab Sample ID: S56645.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 17:53	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56645.02
Sample Tag: MW-22
Collected Date/Time: 05/30/2013 15:03
Matrix: Groundwater
COC Reference: 74244

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	05/31/13 11:20	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:30	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	06/10/13 19:30	PER	7440-38-2	
Barium	0.112	mg/L	0.010	SW6020	06/10/13 19:30	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 19:30	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:30	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:30	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:30	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 19:30	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:30	PER	7439-92-1	
Manganese	0.707	mg/L	0.010	SW6020	06/10/13 19:30	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 14:56	CCM	7439-97-6	
Nickel	0.015	mg/L	0.010	SW6020	06/10/13 19:30	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 19:30	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:30	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:30	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/10/13 19:30	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	205-99-2	

Lab Sample ID: S56645.02 (continued)
Sample Tag: MW-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 21:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	129-00-0	

Lab Sample ID: S56645.02 (continued)
Sample Tag: MW-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 21:46	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/05/13 18:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 21:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 21:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 21:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 21:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 21:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 21:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	100-42-5	

Lab Sample ID: S56645.02 (continued)
Sample Tag: MW-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 21:14	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74244

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task#

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY: ARCADIS
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant Project#: B006448[illegible]2013.00607
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joe Rumsey

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1,4-Dioxane 8260 SIM	Hexavalent Chromium
56615.01	5/30/13	-	Trip Blank	L	2		X						X					
.02	5/30/13	1503	MW-22	GW	7	3	3	1					X	X		X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Joseph Rumsey / Arcadis ☒ Sampler DATE: 5/30/13 TIME: 1810
RECEIVED BY: SIGNATURE/ORGANIZATION: Arcadis DATE: 5/30/13 TIME: 1811

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Arcadis DATE: 5/30/13 TIME: 1830
RECEIVED BY: SIGNATURE/ORGANIZATION: Fed Ex DATE: 5/30/13 TIME: 1830

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Fed Ex DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: MA DATE: 5/31/13 TIME: 850

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. Tabetha SEAL INTACT YES ☐ NO ☐ INITIALS 5/31/13 930

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56592.01(01)
Generated on 06/11/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56592.01-S56592.02
Project: Lansing Plant 2 Project# B0064479.2013.00603
Collected Date: 05/24/2013
Submitted Date/Time: 05/28/2013 10:45
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56592.01	Trip Blank	Groundwater	05/24/2013 15:00
S56592.02	MW-12-18	Groundwater	05/24/2013 15:27

Analytical Laboratory Report

Lab Sample ID: S56592.01
Sample Tag: Trip Blank
Collected Date/Time: 05/24/2013 15:00
Matrix: Groundwater
COC Reference: 81660

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/31/13 10:26	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 17:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 17:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 17:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 17:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 17:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 17:11	WAT		

Lab Sample ID: S56592.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 17:11	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56592.02
Sample Tag: MW-12-18
Collected Date/Time: 05/24/2013 15:27
Matrix: Groundwater
COC Reference: 81660

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/30/13 21:02	EMR		
Mercury Digestion	Completed			SW7471A	05/30/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/05/13 08:50	PER		
pH check for VOCs	<2	STD Units		N/A	05/28/13 15:24	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 19:13	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 19:13	PER	7440-38-2	
Barium	0.237	mg/L	0.010	SW6020	06/10/13 19:13	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 19:13	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 19:13	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 19:13	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 19:13	PER	7440-48-4	
Copper	0.005	mg/L	0.002	SW6020	06/10/13 19:13	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 19:13	PER	7439-92-1	
Manganese	0.121	mg/L	0.010	SW6020	06/10/13 19:13	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/30/13 15:08	CCM	7439-97-6	
Nickel	0.087	mg/L	0.010	SW6020	06/10/13 19:13	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 19:13	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 19:13	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 19:13	PER	7440-62-2	
Zinc	0.014	mg/L	0.010	SW6020	06/10/13 19:13	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	91-58-7	

Lab Sample ID: S56592.02 (continued)
Sample Tag: MW-12-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 22:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 22:47	PL	118-74-1	

Lab Sample ID: S56592.02 (continued)
Sample Tag: MW-12-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/28/13 21:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/30/13 21:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/30/13 21:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/30/13 21:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	156-60-5	
1,1-Dichloroethane	3	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/30/13 21:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/30/13 21:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/30/13 21:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	120-82-1	

Lab Sample ID: S56592.02 (continued)
Sample Tag: MW-12-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/30/13 21:32	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

81660

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.: Task#00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 2 Project#: B006447.2013.00003
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villeneuve

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs: TCL	SVOCs: TCL	PCBs	Metals (wHg): TAL	1,4 Dioxane (SIMS)
56592.01	5/24	15:00	Trip blank	GW	2		2						X	X		X	
.02	5/24	15:27	MW-12-18	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] /ME ☒ Sampler DATE: 5/24/13 TIME: 17:30
RECEIVED BY: SIGNATURE/ORGANIZATION: PM Storage DATE: 5/24/13 TIME: 17:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] /Mer DATE: 5-28-13 TIME: 1000

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] /Mer DATE: 5-28-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Foust DATE: 5-28-13 TIME: 1045

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56622.01(01)
Generated on 06/17/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56622.01-S56622.04
Project: Lansing Plant Project# B0064480.2013
Collected Date: 05/29/2013
Submitted Date/Time: 05/30/2013 09:30
Sampled by: Robert Prigge
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56622.01	MW-02-03	Groundwater	05/29/2013 11:05
S56622.02	MW-13-27	Groundwater	05/29/2013 13:35
S56622.03	MW-13-23	Groundwater	05/29/2013 16:35
S56622.04	Trip Blank	Water	05/29/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56622.01
Sample Tag: MW-02-03
Collected Date/Time: 05/29/2013 11:05
Matrix: Groundwater
COC Reference: 74265

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR
1	250ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	05/30/13 10:20	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 12:50	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020	06/14/13 12:50	PER	7440-38-2	
Barium	0.695	mg/L	0.010	SW6020	06/14/13 12:50	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/14/13 12:50	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 12:50	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 12:50	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 12:50	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 12:50	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 12:50	PER	7439-92-1	
Manganese	0.121	mg/L	0.010	SW6020	06/14/13 12:50	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:19	CCM	7439-97-6	
Nickel	0.022	mg/L	0.010	SW6020	06/14/13 12:50	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 12:50	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 12:50	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 12:50	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 12:50	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	205-99-2	

Lab Sample ID: S56622.01 (continued)
Sample Tag: MW-02-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/05/13 19:28	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	129-00-0	

Lab Sample ID: S56622.01 (continued)
Sample Tag: MW-02-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/05/13 19:28	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/04/13 15:58	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 18:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 18:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 18:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 18:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 18:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 18:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	100-42-5	

Lab Sample ID: S56622.01 (continued)
Sample Tag: MW-02-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 18:53	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56622.02
Sample Tag: MW-13-27
Collected Date/Time: 05/29/2013 13:35
Matrix: Groundwater
COC Reference: 74265

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 13:01	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020	06/14/13 13:01	PER	7440-38-2	
Barium	0.069	mg/L	0.010	SW6020	06/14/13 13:01	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/14/13 13:01	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 13:01	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 13:01	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 13:01	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 13:01	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 13:01	PER	7439-92-1	
Manganese	0.813	mg/L	0.010	SW6020	06/14/13 13:01	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:32	CCM	7439-97-6	
Nickel	0.019	mg/L	0.010	SW6020	06/14/13 13:01	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 13:01	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 13:01	PER	7440-22-4	
Vanadium	0.002	mg/L	0.002	SW6020	06/14/13 13:01	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 13:01	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	91-58-7	

Lab Sample ID: S56622.02 (continued)
Sample Tag: MW-13-27

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 17:52	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 17:52	PL	118-74-1	

Lab Sample ID: S56622.02 (continued)
Sample Tag: MW-13-27

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/04/13 16:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 19:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 19:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 19:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 19:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 19:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 19:13	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	120-82-1	

Lab Sample ID: S56622.02 (continued)
Sample Tag: MW-13-27

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 19:13	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56622.03
Sample Tag: MW-13-23
Collected Date/Time: 05/29/2013 16:35
Matrix: Groundwater
COC Reference: 74265

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 13:03	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/14/13 13:03	PER	7440-38-2	
Barium	0.020	mg/L	0.010	SW6020	06/14/13 13:03	PER	7440-39-3	
Boron	0.34	mg/L	0.04	SW6020	06/14/13 13:03	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 13:03	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 13:03	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 13:03	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 13:03	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 13:03	PER	7439-92-1	
Manganese	1.73	mg/L	0.010	SW6020	06/14/13 13:03	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:48	CCM	7439-97-6	
Nickel	0.038	mg/L	0.010	SW6020	06/14/13 13:03	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 13:03	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 13:03	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 13:03	PER	7440-62-2	
Zinc	0.022	mg/L	0.010	SW6020	06/14/13 13:03	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	91-58-7	

Lab Sample ID: S56622.03 (continued)
Sample Tag: MW-13-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 18:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	132-64-9	
Diethyl phthalate	1	ug/L	1	SW8270C	06/06/13 18:25	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 18:25	PL	118-74-1	

Lab Sample ID: S56622.03 (continued)
Sample Tag: MW-13-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/04/13 16:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 19:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 19:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 19:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 19:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 19:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 19:33	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	120-82-1	

Lab Sample ID: S56622.03 (continued)
Sample Tag: MW-13-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 19:33	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56622.04
Sample Tag: Trip Blank
Collected Date/Time: 05/29/2013 00:01
Matrix: Water
COC Reference: 74265

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 16:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 16:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 16:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 16:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 16:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 16:53	WAT		

Lab Sample ID: S56622.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 16:53	WAT	96-12-8	

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74265

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task#

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B00644 02.2013.
SAMPLER(S): PLEASE PRINT/SIGN NAME: Robert Price

TURNAROUND TIME REQUIRED ☒ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (wHg)	1,4 dioxane 8260 SIM	hexavalent chromium					Special Instructions
56622.01	05/29/13	11:05	MW-02-03	GW	7	X	X	X					3	2		1	3	1					24 hr hex Chrome
.02	05/29/13	13:35	MW-13-27	GW	6	X	X	X					3	2		1	3						
.03	05/29/13	16:35	MW-13-23	GW	6	X	X	X					3	2		1	3						
.04	05/29/13	--	Trip Blank	W	2		X						2										

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Robert Price	☒ Sampler	DATE: 05/29/13	TIME: 18:40	
RECEIVED BY: SIGNATURE/ORGANIZATION: /PME		DATE: 5/29/13	TIME: 18:40	
RELINQUISHED BY: SIGNATURE/ORGANIZATION: /PME		DATE: 5/29/13	TIME: 21:00	
RECEIVED BY: SIGNATURE/ORGANIZATION: PM Storage		DATE: 5/29/13	TIME: 21:00	

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Mel		DATE: 5/30/13	TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Faust		DATE: 5-30-13	TIME: 930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.1
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56623.01(01)
Generated on 06/17/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56623.01-S56623.03
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 05/29/2013
Submitted Date/Time: 05/30/2013 09:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56623.01	MW-03-06	Groundwater	05/29/2013 10:17
S56623.02	EB-06	Liquid	05/29/2013 19:25
S56623.03	Trip Blank	Liquid	05/29/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S56623.01
Sample Tag: MW-03-06
Collected Date/Time: 05/29/2013 10:17
Matrix: Groundwater
COC Reference: 74255

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/14/13 13:20	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 13:18	PER	7440-36-0	
Arsenic, Dissolved	0.007	mg/L	0.002	SW6020	06/14/13 13:20	PER	7440-38-2	
Arsenic	0.009	mg/L	0.002	SW6020	06/14/13 13:18	PER	7440-38-2	
Barium, Dissolved	0.282	mg/L	0.010	SW6020	06/14/13 13:20	PER	7440-39-3	
Barium	0.315	mg/L	0.010	SW6020	06/14/13 13:18	PER	7440-39-3	
Boron, Dissolved	0.08	mg/L	0.04	SW6020	06/14/13 13:20	PER	7440-42-8	
Boron	0.08	mg/L	0.04	SW6020	06/14/13 13:18	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/14/13 13:20	PER	7440-43-9	
Cadmium	0.0031	mg/L	0.0010	SW6020	06/14/13 13:18	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/14/13 13:20	PER	7440-47-3	
Chromium	0.022	mg/L	0.010	SW6020	06/14/13 13:18	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/14/13 13:20	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 13:18	PER	7440-48-4	
Copper, Dissolved	0.004	mg/L	0.002	SW6020	06/14/13 13:20	PER	7440-50-8	
Copper	0.015	mg/L	0.002	SW6020	06/14/13 13:18	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/14/13 13:20	PER	7439-92-1	
Lead	0.007	mg/L	0.002	SW6020	06/14/13 13:18	PER	7439-92-1	
Manganese, Dissolved	0.296	mg/L	0.010	SW6020	06/14/13 13:20	PER	7439-96-5	
Manganese	0.446	mg/L	0.010	SW6020	06/14/13 13:18	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:36	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:34	CCM	7439-97-6	
Nickel, Dissolved	0.041	mg/L	0.010	SW6020	06/14/13 13:20	PER	7440-02-0	
Nickel	0.051	mg/L	0.010	SW6020	06/14/13 13:18	PER	7440-02-0	
Selenium, Dissolved	0.007	mg/L	0.005	SW6020	06/14/13 13:20	PER	7782-49-2	
Selenium	0.007	mg/L	0.005	SW6020	06/14/13 13:18	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/14/13 13:20	PER	7440-22-4	
Silver	0.0006	mg/L	0.0005	SW6020	06/14/13 13:18	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/14/13 13:20	PER	7440-62-2	
Vanadium	0.008	mg/L	0.002	SW6020	06/14/13 13:18	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	06/14/13 13:20	PER	7440-66-6	
Zinc	0.027	mg/L	0.010	SW6020	06/14/13 13:18	PER	7440-66-6	

Lab Sample ID: S56623.01 (continued)
Sample Tag: MW-03-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	7005-72-3	
Caprolactam	3	ug/L	1	SW8270C	06/06/13 18:58	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 18:58	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/06/13 18:58	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	88-75-5	

Lab Sample ID: S56623.01 (continued)
Sample Tag: MW-03-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 18:58	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	7	ug/L	5	SW8260B - SIM	06/05/13 15:52	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	76-13-1	
Acetone	14	ug/L	10	SW8260B	05/31/13 22:55	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 22:55	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 22:55	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	74-87-3	
Vinyl chloride	12	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 22:55	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 22:55	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	108-87-2	

Lab Sample ID: S56623.01 (continued)
Sample Tag: MW-03-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 22:55	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 22:55	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56623.02
Sample Tag: EB-06
Collected Date/Time: 05/29/2013 19:25
Matrix: Liquid
COC Reference: 74255

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 13:31	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/14/13 13:31	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/14/13 13:31	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/14/13 13:31	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 13:31	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 13:31	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 13:31	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 13:31	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 13:31	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/14/13 13:31	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:38	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 13:31	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 13:31	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 13:31	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 13:31	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 13:31	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/06/13 19:32	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	85-68-7	

B-Compound also found in associated method blank

Lab Sample ID: S56623.02 (continued)
Sample Tag: EB-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 19:32	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 19:32	PL	118-74-1	

Lab Sample ID: S56623.02 (continued)
Sample Tag: EB-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 19:54	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 19:54	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 19:54	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 19:54	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 19:54	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 19:54	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 19:54	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56623.03
Sample Tag: Trip Blank
Collected Date/Time: 05/29/2013 08:00
Matrix: Liquid
COC Reference: 74255

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 17:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 17:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 17:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 17:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 17:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 17:13	WAT		

Lab Sample ID: S56623.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 17:13	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74255

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task#00607

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006440.0001.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE STELTER

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1-4 - Plastics (Trip Blank)	Dissolved (TAL)
56623.01	5/29	1017	MW-03-06	GW	7	2	3	2					X	X		X	X	X
.02	5/29	1925	EB-06	↓	6	2	3	1					X	X		X		
.03	5/29	0800	TRIP BLANK	L	1		1						X					

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☒ Sampler DATE 5/29/13 TIME 1800
RECEIVED BY: SIGNATURE/ORGANIZATION Fun Storage DATE 5/29/13 TIME 1930
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 5/30/13 TIME 900

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tabatha Faust DATE 5-30-13 TIME 930

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56624.01(01)
Generated on 06/17/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56624.01-S56624.04
Project: Lansing Plant 2 Project# B0064479.2013.00603
Collected Date: 05/29/2013
Submitted Date/Time: 05/30/2013 09:30
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56624.01	Trip Blank	Groundwater	05/29/2013 08:40
S56624.02	DUP-03	Groundwater	05/29/2013 00:01
S56624.03	MW-12-02	Groundwater	05/29/2013 10:23
S56624.04	P2-SB-03	Groundwater	05/29/2013 16:14

Analytical Laboratory Report

Lab Sample ID: S56624.01
Sample Tag: Trip Blank
Collected Date/Time: 05/29/2013 08:40
Matrix: Groundwater
COC Reference: 74250

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 17:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 17:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 17:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 17:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 17:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 17:33	WAT		

Lab Sample ID: S56624.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 17:33	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56624.02
Sample Tag: DUP-03
Collected Date/Time: 05/29/2013 00:01
Matrix: Groundwater
COC Reference: 74250

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 13:25	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020	06/14/13 13:25	PER	7440-38-2	
Barium	0.174	mg/L	0.010	SW6020	06/14/13 13:25	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/14/13 13:25	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 13:25	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 13:25	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 13:25	PER	7440-48-4	
Copper	0.012	mg/L	0.002	SW6020	06/14/13 13:25	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 13:25	PER	7439-92-1	
Manganese	0.259	mg/L	0.010	SW6020	06/14/13 13:25	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:40	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 13:25	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 13:25	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 13:25	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 13:25	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 13:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	91-58-7	

Lab Sample ID: S56624.02 (continued)
Sample Tag: DUP-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 20:06	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 20:06	PL	118-74-1	

Lab Sample ID: S56624.02 (continued)
Sample Tag: DUP-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/04/13 17:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 20:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 20:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 20:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 20:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 20:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 20:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	120-82-1	

Lab Sample ID: S56624.02 (continued)
Sample Tag: DUP-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 20:14	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56624.03
Sample Tag: MW-12-02
Collected Date/Time: 05/29/2013 10:23
Matrix: Groundwater
COC Reference: 74250

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 13:27	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020	06/14/13 13:27	PER	7440-38-2	
Barium	0.171	mg/L	0.010	SW6020	06/14/13 13:27	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/14/13 13:27	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 13:27	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 13:27	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 13:27	PER	7440-48-4	
Copper	0.010	mg/L	0.002	SW6020	06/14/13 13:27	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 13:27	PER	7439-92-1	
Manganese	0.252	mg/L	0.010	SW6020	06/14/13 13:27	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:42	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 13:27	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 13:27	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 13:27	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 13:27	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 13:27	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	91-58-7	

Lab Sample ID: S56624.03 (continued)
Sample Tag: MW-12-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 20:39	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 20:39	PL	118-74-1	

Lab Sample ID: S56624.03 (continued)
Sample Tag: MW-12-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/04/13 17:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 20:34	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 20:34	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 20:34	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 20:34	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 20:34	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 20:34	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	120-82-1	

Lab Sample ID: S56624.03 (continued)
Sample Tag: MW-12-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 20:34	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56624.04
Sample Tag: P2-SB-03
Collected Date/Time: 05/29/2013 16:14
Matrix: Groundwater
COC Reference: 74250

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	05/31/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 13:29	PER	7440-36-0	
Arsenic	0.024	mg/L	0.002	SW6020	06/14/13 13:29	PER	7440-38-2	
Barium	0.209	mg/L	0.010	SW6020	06/14/13 13:29	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	06/14/13 13:29	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 13:29	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 13:29	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 13:29	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	06/14/13 13:29	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 13:29	PER	7439-92-1	
Manganese	0.043	mg/L	0.010	SW6020	06/14/13 13:29	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/31/13 15:44	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 13:29	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 13:29	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 13:29	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 13:29	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 13:29	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	91-58-7	

Lab Sample ID: S56624.04 (continued)
Sample Tag: P2-SB-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 21:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 21:12	PL	118-74-1	

Lab Sample ID: S56624.04 (continued)
Sample Tag: P2-SB-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/04/13 18:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 20:54	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 20:54	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 20:54	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 20:54	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 20:54	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 20:54	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	120-82-1	

Lab Sample ID: S56624.04 (continued)
Sample Tag: P2-SB-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 20:54	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74250

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task#00603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 2 Project#: B006447.2013.00603

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villhauer / AV

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE (YEAR 2013)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1,4 dioxane (SIMS)
56624.01	5/29	8:40	Trip blank	GW	2		2						X				
.02	5/29	[redacted]	DUP-03	GW	6	2	3	1					X	X		X	X
.03	5/29	10:23	MW-12-07	GW	6	2	3	1					X	X		X	X
.04	5/29	16:14	P2-SB-03	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME	☒ Sampler	DATE 5/29/13 TIME 21:00
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage		DATE 5/29/13 TIME 21:09
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 5-30-13 TIME 900

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust		DATE 5-30-13 TIME 930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.1
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56646.01(01)
Generated on 06/17/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

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Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56646.01-S56646.04
Project: Lansing Plant 2 Project# B0064479.2013.00603
Collected Date: 05/30/2013
Submitted Date/Time: 05/31/2013 09:30
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56646.01	Trip Blank	Groundwater	05/30/2013 08:30
S56646.02	P2-MW-01	Groundwater	05/30/2013 11:30
S56646.03	EQ-07	Groundwater	05/30/2013 11:50
S56646.04	P2-MW-04	Groundwater	05/30/2013 16:45

Analytical Laboratory Report

Lab Sample ID: S56646.01
Sample Tag: Trip Blank
Collected Date/Time: 05/30/2013 08:30
Matrix: Groundwater
COC Reference: 74289

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 18:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 18:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 18:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 18:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 18:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 18:13	WAT		

Lab Sample ID: S56646.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 18:13	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56646.02
Sample Tag: P2-MW-01
Collected Date/Time: 05/30/2013 11:30
Matrix: Groundwater
COC Reference: 74289

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 13:33	PER	7440-36-0	
Arsenic	0.013	mg/L	0.002	SW6020	06/14/13 13:33	PER	7440-38-2	
Barium	1.19	mg/L	0.010	SW6020	06/14/13 13:33	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	06/14/13 13:33	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 13:33	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 13:33	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 13:33	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	06/14/13 13:33	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 13:33	PER	7439-92-1	
Manganese	0.211	mg/L	0.010	SW6020	06/14/13 13:33	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 14:58	CCM	7439-97-6	
Nickel	0.020	mg/L	0.010	SW6020	06/14/13 13:33	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 13:33	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 13:33	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 13:33	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 13:33	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	91-58-7	

Lab Sample ID: S56646.02 (continued)
Sample Tag: P2-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 22:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 22:20	PL	118-74-1	

Lab Sample ID: S56646.02 (continued)
Sample Tag: P2-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/05/13 19:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 21:34	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 21:34	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 21:34	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 21:34	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 21:34	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 21:34	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	120-82-1	

Lab Sample ID: S56646.02 (continued)
Sample Tag: P2-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 21:34	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56646.03
Sample Tag: EQ-07
Collected Date/Time: 05/30/2013 11:50
Matrix: Groundwater
COC Reference: 74289

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 14:19	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/14/13 14:19	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/14/13 14:19	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/14/13 14:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:19	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 14:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 14:19	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/14/13 14:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:00	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 14:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 14:19	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 14:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	91-58-7	

Lab Sample ID: S56646.03 (continued)
Sample Tag: EQ-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 22:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 22:53	PL	118-74-1	

Lab Sample ID: S56646.03 (continued)
Sample Tag: EQ-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/05/13 19:32	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/04/13 17:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/04/13 17:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/04/13 17:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/04/13 17:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/04/13 17:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/04/13 17:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	120-82-1	

Lab Sample ID: S56646.03 (continued)
Sample Tag: EQ-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/04/13 17:17	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56646.04
Sample Tag: P2-MW-04
Collected Date/Time: 05/30/2013 16:45
Matrix: Groundwater
COC Reference: 74289

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/31/13 22:37	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	0.003	mg/L	0.002	SW6020	06/14/13 14:21	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020	06/14/13 14:21	PER	7440-38-2	
Barium	0.057	mg/L	0.010	SW6020	06/14/13 14:21	PER	7440-39-3	
Boron	0.19	mg/L	0.04	SW6020	06/14/13 14:21	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:21	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:21	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:21	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	06/14/13 14:21	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 14:21	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/14/13 14:21	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:04	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 14:21	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:21	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:21	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 14:21	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 14:21	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	91-58-7	

Lab Sample ID: S56646.04 (continued)
Sample Tag: P2-MW-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 23:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 23:27	PL	118-74-1	

Lab Sample ID: S56646.04 (continued)
Sample Tag: P2-MW-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/05/13 19:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 22:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 22:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 22:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 22:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 22:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 22:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	120-82-1	

Lab Sample ID: S56646.04 (continued)
Sample Tag: P2-MW-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 22:14	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74289

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO ~~[illegible]~~
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task#00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 2 Project#: B006447.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villaeot

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE (YEAR 2013)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs: TCL	SVOCs: TCL	PCBs	Metals (w/Hg): TAL	1,4 d.xane (SIMS)
56646.01	5/30/13	8:30	Trip blank	GW	2		2						X				
.02	5/30	11:30	P2-MW-01	GW	6	2	3	1					X	X		X	X
.03	5/30	11:50	EQ-07	GW	6	2	3	1					X	X		X	X
.04	5/30	16:45	P2-MW-04	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION		☒ Sampler	DATE	TIME
			5/30/13	18:15
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage		5/30/13	18:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			5-31-13	855

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		5-31-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust	DATE	TIME
		5-31-13	930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56647.01(01)
Generated on 06/17/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56647.01-S56647.04
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 05/30/2013
Submitted Date/Time: 05/31/2013 09:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56647.01	P6 SB-18	Groundwater	05/30/2013 15:00
S56647.02	MW-12-13	Groundwater	05/30/2013 17:11
S56647.03	Trip Blank	Liquid	05/30/2013 08:00
S56647.04	Dup-04	Groundwater	05/30/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56647.01
Sample Tag: P6 SB-18
Collected Date/Time: 05/30/2013 15:00
Matrix: Groundwater
COC Reference: 74261

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	0.006	mg/L	0.002	SW6020	06/14/13 14:32	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	06/14/13 14:32	PER	7440-38-2	
Barium	0.031	mg/L	0.010	SW6020	06/14/13 14:32	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	06/14/13 14:32	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:32	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:32	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:32	PER	7440-48-4	
Copper	0.038	mg/L	0.002	SW6020	06/14/13 14:32	PER	7440-50-8	
Lead	0.090	mg/L	0.002	SW6020	06/14/13 14:32	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/14/13 14:32	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:02	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 14:32	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:32	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:32	PER	7440-22-4	
Vanadium	0.021	mg/L	0.002	SW6020	06/14/13 14:32	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 14:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	3	ug/L	1	SW8270C	06/06/13 13:58	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	06/06/13 13:58	PL	84-74-2	
Benzaldehyde	1	ug/L	1	SW8270C	06/06/13 13:58	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	91-58-7	

Lab Sample ID: S56647.01 (continued)
Sample Tag: P6 SB-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	120-83-2	
2,4-Dimethylphenol	2	ug/L	1	SW8270C	06/06/13 13:58	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 13:58	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/06/13 13:58	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	78-59-1	
2-Methylnaphthalene	2	ug/L	1	SW8270C	06/06/13 13:58	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	86-30-6	
Naphthalene	2	ug/L	1	SW8270C	06/06/13 13:58	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	85-01-8	
Phenol	1	ug/L	1	SW8270C	06/06/13 13:58	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 13:58	PL	118-74-1	

Lab Sample ID: S56647.01 (continued)
Sample Tag: P6 SB-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 14:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	76-13-1	X
Acetone	Not detected	ug/L	50	SW8260B	05/31/13 23:15	WAT	67-64-1	X
Carbon disulfide	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-15-0	X
Methyl Acetate	Not detected	ug/L	50	SW8260B	05/31/13 23:15	WAT	79-20-9	X
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	1634-04-4	X
2-Butanone (MEK)	Not detected	ug/L	50	SW8260B	05/31/13 23:15	WAT	78-93-3	X
Dichlorodifluoromethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-71-8	X
Chloromethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	74-87-3	X
Vinyl chloride	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-01-4	X
Bromomethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	74-83-9	X
Chloroethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-00-3	X
Trichlorofluoromethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-69-4	X
1,1-Dichloroethene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-35-4	X
Methylene chloride	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-09-2	X
trans-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	156-60-5	X
1,1-Dichloroethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-34-3	X
cis-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	156-59-2	X
Chloroform	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	67-66-3	X
1,1,1-Trichloroethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	71-55-6	X
Cyclohexane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	110-82-7	X
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	SW8260B	05/31/13 23:15	WAT	108-10-1	X
2-Hexanone	Not detected	ug/L	50	SW8260B	05/31/13 23:15	WAT	591-78-6	X
Carbon tetrachloride	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	56-23-5	X
Benzene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	71-43-2	X
1,2-Dichloroethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	107-06-2	X
Trichloroethene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	79-01-6	X
1,2-Dichloropropane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	78-87-5	X
Bromodichloromethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-27-4	X
Methyl cyclohexane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	108-87-2	X
cis-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	10061-01-5	X
Toluene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	108-88-3	X
trans-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	10061-02-6	X
1,1,2-Trichloroethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	79-00-5	X
Tetrachloroethene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	127-18-4	X
Dibromochloromethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	124-48-1	X
Chlorobenzene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	108-90-7	X
1,1,2,2-Tetrachloroethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	79-34-5	X
Ethylbenzene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	100-41-4	X
p,m-Xylene	Not detected	ug/L	10	SW8260B	05/31/13 23:15	WAT		X
o-Xylene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	95-47-6	X
Styrene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	100-42-5	X
Isopropylbenzene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	98-82-8	X
Bromoform	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	75-25-2	X
1,3-Dichlorobenzene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	541-73-1	X
1,4-Dichlorobenzene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	106-46-7	X
1,2-Dichlorobenzene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	95-50-1	X

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S56647.01 (continued)
Sample Tag: P6 SB-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	120-82-1	X
1,2-Dibromoethane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	106-93-4	X
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	SW8260B	05/31/13 23:15	WAT	96-12-8	X

X-Elevated reporting limit due to matrix interference

Analytical Laboratory Report

Lab Sample ID: S56647.02
Sample Tag: MW-12-13
Collected Date/Time: 05/30/2013 17:11
Matrix: Groundwater
COC Reference: 74261

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 14:34	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/14/13 14:34	PER	7440-38-2	
Barium	0.158	mg/L	0.010	SW6020	06/14/13 14:34	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	06/14/13 14:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:34	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:34	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 14:34	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 14:34	PER	7439-92-1	
Manganese	0.131	mg/L	0.010	SW6020	06/14/13 14:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:14	CCM	7439-97-6	
Nickel	0.014	mg/L	0.010	SW6020	06/14/13 14:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:34	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:34	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 14:34	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 14:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	91-58-7	

Lab Sample ID: S56647.02 (continued)
Sample Tag: MW-12-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	7005-72-3	
Caprolactam	3	ug/L	1	SW8270C	06/06/13 14:31	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 14:31	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 14:31	PL	118-74-1	

Lab Sample ID: S56647.02 (continued)
Sample Tag: MW-12-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 14:22	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 22:34	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 22:34	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 22:34	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 22:34	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 22:34	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 22:34	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	120-82-1	

Lab Sample ID: S56647.02 (continued)
Sample Tag: MW-12-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 22:34	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56647.03
Sample Tag: Trip Blank
Collected Date/Time: 05/30/2013 08:00
Matrix: Liquid
COC Reference: 74261

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:45	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/31/13 18:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/31/13 18:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/31/13 18:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/31/13 18:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/31/13 18:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/31/13 18:33	WAT		

Lab Sample ID: S56647.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/31/13 18:33	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56647.04
Sample Tag: Dup-04
Collected Date/Time: 05/30/2013 00:01
Matrix: Groundwater
COC Reference: 74261

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 10:50	WAT		
Metals								
Antimony	0.006	mg/L	0.002	SW6020	06/14/13 14:36	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	06/14/13 14:36	PER	7440-38-2	
Barium	0.031	mg/L	0.010	SW6020	06/14/13 14:36	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	06/14/13 14:36	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:36	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:36	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:36	PER	7440-48-4	
Copper	0.038	mg/L	0.002	SW6020	06/14/13 14:36	PER	7440-50-8	
Lead	0.089	mg/L	0.002	SW6020	06/14/13 14:36	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/14/13 14:36	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:16	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 14:36	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:36	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:36	PER	7440-22-4	
Vanadium	0.022	mg/L	0.002	SW6020	06/14/13 14:36	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 14:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	5	ug/L	1	SW8270C	06/06/13 15:05	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	98-86-2	
Anthracene	1	ug/L	1	SW8270C	06/06/13 15:05	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	06/06/13 15:05	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	91-58-7	

Lab Sample ID: S56647.04 (continued)
Sample Tag: Dup-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	120-83-2	
2,4-Dimethylphenol	2	ug/L	1	SW8270C	06/06/13 15:05	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 15:05	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/06/13 15:05	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	206-44-0	
Fluorene	1	ug/L	1	SW8270C	06/06/13 15:05	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	78-59-1	
2-Methylnaphthalene	3	ug/L	1	SW8270C	06/06/13 15:05	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	86-30-6	
Naphthalene	4	ug/L	1	SW8270C	06/06/13 15:05	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	87-86-5	
Phenanthrene	1	ug/L	1	SW8270C	06/06/13 15:05	PL	85-01-8	
Phenol	2	ug/L	1	SW8270C	06/06/13 15:05	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 15:05	PL	118-74-1	

Lab Sample ID: S56647.04 (continued)
Sample Tag: Dup-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 15:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	76-13-1	
Acetone	Not detected	ug/L	50	SW8260B	06/04/13 16:57	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	50	SW8260B	06/04/13 16:57	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	50	SW8260B	06/04/13 16:57	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-71-8	
Chloromethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-01-4	
Bromomethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	74-83-9	
Chloroethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	156-59-2	
Chloroform	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	SW8260B	06/04/13 16:57	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260B	06/04/13 16:57	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	56-23-5	
Benzene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	10061-01-5	
Toluene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	10	SW8260B	06/04/13 16:57	WAT		
o-Xylene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	95-47-6	
Styrene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	98-82-8	
Bromoform	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	120-82-1	

Lab Sample ID: S56647.04 (continued)
Sample Tag: Dup-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	SW8260B	06/04/13 16:57	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74261

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: | ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448 1.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs TCL	SVOCs TCL	PCBs	Metals (w/Hg) TAL	1-4-Dioxane (SIM)						
56647.01	5/30	1500	PG SB-18	GW	6	2	3	1					X	X		X	X						
.02	5/30	1711	MW-12-13	GW	6	2	3	1					X	X		X	X						
.03	5/30	0800	TRIP BLANK	L	1			1					X										
.04	5/30		DUP-04	GW	6	2	3	1					X	X		X	X						

RELINQUISHED BY: SIGNATURE/ORGANIZATION		☒ Sampler	DATE	TIME
			5/30/13	1800
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage		5/30/13	1835
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			5-31-13	855

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		5-31-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust	DATE	TIME
		5-31-13	430
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56648.01(01)
Generated on 06/17/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56648.01-S56648.04
Project: Lansing Plant Project# B0064480.2013
Collected Date: 05/30/2013
Submitted Date/Time: 05/31/2013 09:30
Sampled by: Robert Prigge
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56648.01	MW-13-24	Groundwater	05/30/2013 16:20
S56648.02	MW-13-24 MS	Groundwater	05/30/2013 16:20
S56648.03	MW-13-24 MSD	Groundwater	05/30/2013 16:20
S56648.04	Trip Blank	Groundwater	05/30/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56648.01
Sample Tag: MW-13-24
Collected Date/Time: 05/30/2013 16:20
Matrix: Groundwater
COC Reference: 74264

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 14:47	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/14/13 14:47	PER	7440-38-2	
Barium	0.026	mg/L	0.010	SW6020	06/14/13 14:47	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020	06/14/13 14:47	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:47	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:47	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:47	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 14:47	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 14:47	PER	7439-92-1	
Manganese	0.378	mg/L	0.010	SW6020	06/14/13 14:47	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:28	CCM	7439-97-6	
Nickel	0.022	mg/L	0.010	SW6020	06/14/13 14:47	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:47	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:47	PER	7440-22-4	
Vanadium	0.002	mg/L	0.002	SW6020	06/14/13 14:47	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 14:47	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	91-58-7	

Lab Sample ID: S56648.01 (continued)
Sample Tag: MW-13-24

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 15:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	06/06/13 15:38	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 15:38	PL	118-74-1	

Lab Sample ID: S56648.01 (continued)
Sample Tag: MW-13-24

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 15:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/04/13 16:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/04/13 16:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/04/13 16:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/04/13 16:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/04/13 16:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/04/13 16:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	120-82-1	

Lab Sample ID: S56648.01 (continued)
Sample Tag: MW-13-24

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/04/13 16:17	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56648.02
Sample Tag: MW-13-24 MS
Collected Date/Time: 05/30/2013 16:20
Matrix: Groundwater
COC Reference: 74264

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Metals								
Antimony	0.275	mg/L	0.002	SW6020	06/14/13 14:55	PER	7440-36-0	
Arsenic	0.256	mg/L	0.002	SW6020	06/14/13 14:55	PER	7440-38-2	
Barium	0.294	mg/L	0.010	SW6020	06/14/13 14:55	PER	7440-39-3	
Boron	0.35	mg/L	0.04	SW6020	06/14/13 14:55	PER	7440-42-8	
Cadmium	0.260	mg/L	0.0010	SW6020	06/14/13 14:55	PER	7440-43-9	
Chromium	0.237	mg/L	0.010	SW6020	06/14/13 14:55	PER	7440-47-3	
Cobalt	0.235	mg/L	0.010	SW6020	06/14/13 14:55	PER	7440-48-4	
Copper	0.220	mg/L	0.002	SW6020	06/14/13 14:55	PER	7440-50-8	
Lead	0.236	mg/L	0.002	SW6020	06/14/13 14:55	PER	7439-92-1	
Manganese	0.623	mg/L	0.010	SW6020	06/14/13 14:55	PER	7439-96-5	
Mercury	0.002012	mg/L	0.0001	SW7471A	06/03/13 15:30	CCM	7439-97-6	
Nickel	0.246	mg/L	0.010	SW6020	06/14/13 14:55	PER	7440-02-0	
Selenium	0.289	mg/L	0.005	SW6020	06/14/13 14:55	PER	7782-49-2	
Silver	0.214	mg/L	0.0005	SW6020	06/14/13 14:55	PER	7440-22-4	
Vanadium	0.235	mg/L	0.002	SW6020	06/14/13 14:55	PER	7440-62-2	
Zinc	0.233	mg/L	0.010	SW6020	06/14/13 14:55	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	54	ug/L	1	SW8270C	06/06/13 16:11	PL	83-32-9	1
Acenaphthylene	52	ug/L	1	SW8270C	06/06/13 16:11	PL	208-96-8	1
Acetophenone	43	ug/L	1	SW8270C	06/06/13 16:11	PL	98-86-2	1
Anthracene	54	ug/L	1	SW8270C	06/06/13 16:11	PL	120-12-7	1
Atrazine	47	ug/L	1	SW8270C	06/06/13 16:11	PL	1912-24-9	1
1,1'-Biphenyl	45	ug/L	1	SW8270C	06/06/13 16:11	PL	92-52-4	1
4-Bromophenyl phenyl ether	47	ug/L	1	SW8270C	06/06/13 16:11	PL	101-55-3	1
di-n-Butyl phthalate	55	ug/L	1	SW8270C	06/06/13 16:11	PL	84-74-2	1
Benzaldehyde	40	ug/L	1	SW8270C	06/06/13 16:11	PL	100-52-7	1
Benzo(a)anthracene	52	ug/L	1	SW8270C	06/06/13 16:11	PL	56-55-3	1
Benzo(a)pyrene	52	ug/L	1	SW8270C	06/06/13 16:11	PL	50-32-8	1
Benzo(b)fluoranthene	52	ug/L	1	SW8270C	06/06/13 16:11	PL	205-99-2	1
Benzo(ghi)perylene	37	ug/L	1	SW8270C	06/06/13 16:11	PL	191-24-2	1
Benzo(k)fluoranthene	50	ug/L	1	SW8270C	06/06/13 16:11	PL	207-08-9	1
Butyl benzyl phthalate	53	ug/L	1	SW8270C	06/06/13 16:11	PL	85-68-7	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S56648.02 (continued)
Sample Tag: MW-13-24 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	44	ug/L	1	SW8270C	06/06/13 16:11	PL	91-58-7	1
2-Chlorophenol	43	ug/L	1	SW8270C	06/06/13 16:11	PL	95-57-8	1
4-Chloro-3-methylphenol	49	ug/L	1	SW8270C	06/06/13 16:11	PL	59-50-7	1
4-Chloroaniline	17	ug/L	1	SW8270C	06/06/13 16:11	PL	106-47-8	1
4-Chlorophenyl phenyl ether	48	ug/L	1	SW8270C	06/06/13 16:11	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270C	06/06/13 16:11	PL	105-60-2	1
Carbazole	51	ug/L	1	SW8270C	06/06/13 16:11	PL	86-74-8	1
bis(2-Chloroethoxy)methane	47	ug/L	1	SW8270C	06/06/13 16:11	PL	111-91-1	1
bis(2-Chloroethyl)ether	42	ug/L	1	SW8270C	06/06/13 16:11	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	42	ug/L	1	SW8270C	06/06/13 16:11	PL	108-60-1	1
Chrysene	58	ug/L	1	SW8270C	06/06/13 16:11	PL	218-01-9	1
2,4-Dichlorophenol	48	ug/L	1	SW8270C	06/06/13 16:11	PL	120-83-2	1
2,4-Dimethylphenol	51	ug/L	1	SW8270C	06/06/13 16:11	PL	105-67-9	1
2,4-Dinitrophenol	40	ug/L	1	SW8270C	06/06/13 16:11	PL	51-28-5	1
2,4-Dinitrotoluene	48	ug/L	1	SW8270C	06/06/13 16:11	PL	121-14-2	1
2,6-Dinitrotoluene	47	ug/L	1	SW8270C	06/06/13 16:11	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	42	ug/L	1	SW8270C	06/06/13 16:11	PL	534-52-1	1
Dibenzo(ah)anthracene	40	ug/L	2	SW8270C	06/06/13 16:11	PL	53-70-3	1
Dibenzofuran	55	ug/L	1	SW8270C	06/06/13 16:11	PL	132-64-9	1
Diethyl phthalate	55	ug/L	2	SW8270C	06/06/13 16:11	PL	84-66-2	1B
Dimethyl phthalate	49	ug/L	1	SW8270C	06/06/13 16:11	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	58	ug/L	1	SW8270C	06/06/13 16:11	PL	117-81-7	1
Fluoranthene	52	ug/L	1	SW8270C	06/06/13 16:11	PL	206-44-0	1
Fluorene	54	ug/L	1	SW8270C	06/06/13 16:11	PL	86-73-7	1
Hexachlorobutadiene	39	ug/L	1	SW8270C	06/06/13 16:11	PL	87-68-3	1
Hexachlorocyclopentadiene	52	ug/L	1	SW8270C	06/06/13 16:11	PL	77-47-4	1
Hexachloroethane	34	ug/L	1	SW8270C	06/06/13 16:11	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	39	ug/L	1	SW8270C	06/06/13 16:11	PL	193-39-5	1
Isophorone	60	ug/L	1	SW8270C	06/06/13 16:11	PL	78-59-1	1
2-Methylnaphthalene	49	ug/L	1	SW8270C	06/06/13 16:11	PL	91-57-6	1
2-Methylphenol	43	ug/L	1	SW8270C	06/06/13 16:11	PL	95-48-7	1
3-, 4-Methylphenol	43	ug/L	1	SW8270C	06/06/13 16:11	PL	3/4-Cresol	1
2-Nitroaniline	48	ug/L	1	SW8270C	06/06/13 16:11	PL	88-74-4	1
2-Nitrophenol	45	ug/L	1	SW8270C	06/06/13 16:11	PL	88-75-5	1
3-Nitroaniline	34	ug/L	1	SW8270C	06/06/13 16:11	PL	99-09-2	1
4-Nitroaniline	42	ug/L	1	SW8270C	06/06/13 16:11	PL	100-01-6	1
4-Nitrophenol	38	ug/L	1	SW8270C	06/06/13 16:11	PL	100-02-7	1
N-Nitrosodi-n-propylamine	45	ug/L	1	SW8270C	06/06/13 16:11	PL	621-64-7	1
N-Nitrosodiphenylamine	47	ug/L	1	SW8270C	06/06/13 16:11	PL	86-30-6	1
Naphthalene	48	ug/L	1	SW8270C	06/06/13 16:11	PL	91-20-3	1
Nitrobenzene	42	ug/L	1	SW8270C	06/06/13 16:11	PL	98-95-3	1
di-n-Octyl phthalate	52	ug/L	1	SW8270C	06/06/13 16:11	PL	117-84-0	1
Pentachlorophenol	48	ug/L	1	SW8270C	06/06/13 16:11	PL	87-86-5	1
Phenanthrene	53	ug/L	1	SW8270C	06/06/13 16:11	PL	85-01-8	1
Phenol	31	ug/L	1	SW8270C	06/06/13 16:11	PL	108-95-2	1
Pyrene	53	ug/L	1	SW8270C	06/06/13 16:11	PL	129-00-0	1
2,4,5-Trichlorophenol	48	ug/L	1	SW8270C	06/06/13 16:11	PL	95-95-4	1

1-Sample spiked at 50 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S56648.02 (continued)
Sample Tag: MW-13-24 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	45	ug/L	1	SW8270C	06/06/13 16:11	PL	88-06-2	1
Hexachlorobenzene	51	ug/L	1	SW8270C	06/06/13 16:11	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	43	ug/L	5	SW8260B - SIM	06/06/13 20:14	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	54	ug/L	1	SW8260B	06/04/13 14:16	WAT	76-13-1	2
Acetone	53	ug/L	10	SW8260B	06/04/13 14:16	WAT	67-64-1	2
Carbon disulfide	49	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-15-0	2
Methyl Acetate	57	ug/L	10	SW8260B	06/04/13 14:16	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	54	ug/L	1	SW8260B	06/04/13 14:16	WAT	1634-04-4	2
2-Butanone (MEK)	52	ug/L	10	SW8260B	06/04/13 14:16	WAT	78-93-3	2
Dichlorodifluoromethane	36	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-71-8	2
Chloromethane	52	ug/L	1	SW8260B	06/04/13 14:16	WAT	74-87-3	2
Vinyl chloride	53	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-01-4	2
Bromomethane	60	ug/L	1	SW8260B	06/04/13 14:16	WAT	74-83-9	2
Chloroethane	65	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-00-3	2
Trichlorofluoromethane	56	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-69-4	2
1,1-Dichloroethene	49	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-35-4	2
Methylene chloride	50	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	06/04/13 14:16	WAT	156-60-5	2
1,1-Dichloroethane	53	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-34-3	2
cis-1,2-Dichloroethene	52	ug/L	1	SW8260B	06/04/13 14:16	WAT	156-59-2	2
Chloroform	53	ug/L	1	SW8260B	06/04/13 14:16	WAT	67-66-3	2
1,1,1-Trichloroethane	54	ug/L	1	SW8260B	06/04/13 14:16	WAT	71-55-6	2
Cyclohexane	51	ug/L	1	SW8260B	06/04/13 14:16	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	59	ug/L	10	SW8260B	06/04/13 14:16	WAT	108-10-1	2
2-Hexanone	58	ug/L	10	SW8260B	06/04/13 14:16	WAT	591-78-6	2
Carbon tetrachloride	53	ug/L	1	SW8260B	06/04/13 14:16	WAT	56-23-5	2
Benzene	54	ug/L	1	SW8260B	06/04/13 14:16	WAT	71-43-2	2
1,2-Dichloroethane	54	ug/L	1	SW8260B	06/04/13 14:16	WAT	107-06-2	2
Trichloroethene	51	ug/L	1	SW8260B	06/04/13 14:16	WAT	79-01-6	2
1,2-Dichloropropane	55	ug/L	1	SW8260B	06/04/13 14:16	WAT	78-87-5	2
Bromodichloromethane	54	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-27-4	2
Methyl cyclohexane	48	ug/L	1	SW8260B	06/04/13 14:16	WAT	108-87-2	2
cis-1,3-Dichloropropene	52	ug/L	1	SW8260B	06/04/13 14:16	WAT	10061-01-5	2
Toluene	51	ug/L	1	SW8260B	06/04/13 14:16	WAT	108-88-3	2
trans-1,3-Dichloropropene	50	ug/L	1	SW8260B	06/04/13 14:16	WAT	10061-02-6	2
1,1,2-Trichloroethane	54	ug/L	1	SW8260B	06/04/13 14:16	WAT	79-00-5	2
Tetrachloroethene	47	ug/L	1	SW8260B	06/04/13 14:16	WAT	127-18-4	2
Dibromochloromethane	48	ug/L	1	SW8260B	06/04/13 14:16	WAT	124-48-1	2
Chlorobenzene	52	ug/L	1	SW8260B	06/04/13 14:16	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	60	ug/L	1	SW8260B	06/04/13 14:16	WAT	79-34-5	2
Ethylbenzene	52	ug/L	1	SW8260B	06/04/13 14:16	WAT	100-41-4	2
p,m-Xylene	96	ug/L	2	SW8260B	06/04/13 14:16	WAT		2
o-Xylene	51	ug/L	1	SW8260B	06/04/13 14:16	WAT	95-47-6	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56648.02 (continued)
Sample Tag: MW-13-24 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	24	ug/L	1	SW8260B	06/04/13 14:16	WAT	100-42-5	1
Isopropylbenzene	51	ug/L	1	SW8260B	06/04/13 14:16	WAT	98-82-8	1
Bromoform	48	ug/L	1	SW8260B	06/04/13 14:16	WAT	75-25-2	1
1,3-Dichlorobenzene	49	ug/L	1	SW8260B	06/04/13 14:16	WAT	541-73-1	1
1,4-Dichlorobenzene	50	ug/L	1	SW8260B	06/04/13 14:16	WAT	106-46-7	1
1,2-Dichlorobenzene	49	ug/L	1	SW8260B	06/04/13 14:16	WAT	95-50-1	1
1,2,4-Trichlorobenzene	49	ug/L	1	SW8260B	06/04/13 14:16	WAT	120-82-1	1
1,2-Dibromoethane	54	ug/L	1	SW8260B	06/04/13 14:16	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	52	ug/L	1	SW8260B	06/04/13 14:16	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S56648.03
Sample Tag: MW-13-24 MSD
Collected Date/Time: 05/30/2013 16:20
Matrix: Groundwater
COC Reference: 74264

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Metals								
Antimony	0.267	mg/L	0.002	SW6020	06/14/13 14:57	PER	7440-36-0	
Arsenic	0.261	mg/L	0.002	SW6020	06/14/13 14:57	PER	7440-38-2	
Barium	0.294	mg/L	0.010	SW6020	06/14/13 14:57	PER	7440-39-3	
Boron	0.37	mg/L	0.04	SW6020	06/14/13 14:57	PER	7440-42-8	
Cadmium	0.258	mg/L	0.0010	SW6020	06/14/13 14:57	PER	7440-43-9	
Chromium	0.249	mg/L	0.010	SW6020	06/14/13 14:57	PER	7440-47-3	
Cobalt	0.239	mg/L	0.010	SW6020	06/14/13 14:57	PER	7440-48-4	
Copper	0.224	mg/L	0.002	SW6020	06/14/13 14:57	PER	7440-50-8	
Lead	0.235	mg/L	0.002	SW6020	06/14/13 14:57	PER	7439-92-1	
Manganese	0.634	mg/L	0.010	SW6020	06/14/13 14:57	PER	7439-96-5	
Mercury	0.001981	mg/L	0.0001	SW7471A	06/03/13 15:32	CCM	7439-97-6	
Nickel	0.252	mg/L	0.010	SW6020	06/14/13 14:57	PER	7440-02-0	
Selenium	0.284	mg/L	0.005	SW6020	06/14/13 14:57	PER	7782-49-2	
Silver	0.208	mg/L	0.0005	SW6020	06/14/13 14:57	PER	7440-22-4	
Vanadium	0.251	mg/L	0.002	SW6020	06/14/13 14:57	PER	7440-62-2	
Zinc	0.238	mg/L	0.010	SW6020	06/14/13 14:57	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	55	ug/L	1	SW8270C	06/06/13 16:45	PL	83-32-9	1
Acenaphthylene	53	ug/L	1	SW8270C	06/06/13 16:45	PL	208-96-8	1
Acetophenone	45	ug/L	1	SW8270C	06/06/13 16:45	PL	98-86-2	1
Anthracene	57	ug/L	1	SW8270C	06/06/13 16:45	PL	120-12-7	1
Atrazine	51	ug/L	1	SW8270C	06/06/13 16:45	PL	1912-24-9	1
1,1'-Biphenyl	46	ug/L	1	SW8270C	06/06/13 16:45	PL	92-52-4	1
4-Bromophenyl phenyl ether	50	ug/L	1	SW8270C	06/06/13 16:45	PL	101-55-3	1
di-n-Butyl phthalate	58	ug/L	1	SW8270C	06/06/13 16:45	PL	84-74-2	1
Benzaldehyde	42	ug/L	1	SW8270C	06/06/13 16:45	PL	100-52-7	1
Benzo(a)anthracene	55	ug/L	1	SW8270C	06/06/13 16:45	PL	56-55-3	1
Benzo(a)pyrene	55	ug/L	1	SW8270C	06/06/13 16:45	PL	50-32-8	1
Benzo(b)fluoranthene	53	ug/L	1	SW8270C	06/06/13 16:45	PL	205-99-2	1
Benzo(ghi)perylene	42	ug/L	1	SW8270C	06/06/13 16:45	PL	191-24-2	1
Benzo(k)fluoranthene	54	ug/L	1	SW8270C	06/06/13 16:45	PL	207-08-9	1
Butyl benzyl phthalate	57	ug/L	1	SW8270C	06/06/13 16:45	PL	85-68-7	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S56648.03 (continued)
Sample Tag: MW-13-24 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	45	ug/L	1	SW8270C	06/06/13 16:45	PL	91-58-7	1
2-Chlorophenol	44	ug/L	1	SW8270C	06/06/13 16:45	PL	95-57-8	1
4-Chloro-3-methylphenol	51	ug/L	1	SW8270C	06/06/13 16:45	PL	59-50-7	1
4-Chloroaniline	19	ug/L	1	SW8270C	06/06/13 16:45	PL	106-47-8	1
4-Chlorophenyl phenyl ether	50	ug/L	1	SW8270C	06/06/13 16:45	PL	7005-72-3	1
Caprolactam	7	ug/L	1	SW8270C	06/06/13 16:45	PL	105-60-2	1
Carbazole	54	ug/L	1	SW8270C	06/06/13 16:45	PL	86-74-8	1
bis(2-Chloroethoxy)methane	47	ug/L	1	SW8270C	06/06/13 16:45	PL	111-91-1	1
bis(2-Chloroethyl)ether	43	ug/L	1	SW8270C	06/06/13 16:45	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	43	ug/L	1	SW8270C	06/06/13 16:45	PL	108-60-1	1
Chrysene	61	ug/L	1	SW8270C	06/06/13 16:45	PL	218-01-9	1
2,4-Dichlorophenol	50	ug/L	1	SW8270C	06/06/13 16:45	PL	120-83-2	1
2,4-Dimethylphenol	52	ug/L	1	SW8270C	06/06/13 16:45	PL	105-67-9	1
2,4-Dinitrophenol	44	ug/L	1	SW8270C	06/06/13 16:45	PL	51-28-5	1
2,4-Dinitrotoluene	50	ug/L	1	SW8270C	06/06/13 16:45	PL	121-14-2	1
2,6-Dinitrotoluene	49	ug/L	1	SW8270C	06/06/13 16:45	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	47	ug/L	1	SW8270C	06/06/13 16:45	PL	534-52-1	1
Dibenzo(ah)anthracene	45	ug/L	2	SW8270C	06/06/13 16:45	PL	53-70-3	1
Dibenzofuran	57	ug/L	1	SW8270C	06/06/13 16:45	PL	132-64-9	1
Diethyl phthalate	57	ug/L	2	SW8270C	06/06/13 16:45	PL	84-66-2	1B
Dimethyl phthalate	50	ug/L	1	SW8270C	06/06/13 16:45	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	62	ug/L	1	SW8270C	06/06/13 16:45	PL	117-81-7	1
Fluoranthene	56	ug/L	1	SW8270C	06/06/13 16:45	PL	206-44-0	1
Fluorene	56	ug/L	1	SW8270C	06/06/13 16:45	PL	86-73-7	1
Hexachlorobutadiene	42	ug/L	1	SW8270C	06/06/13 16:45	PL	87-68-3	1
Hexachlorocyclopentadiene	53	ug/L	1	SW8270C	06/06/13 16:45	PL	77-47-4	1
Hexachloroethane	37	ug/L	1	SW8270C	06/06/13 16:45	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	44	ug/L	1	SW8270C	06/06/13 16:45	PL	193-39-5	1
Isophorone	62	ug/L	1	SW8270C	06/06/13 16:45	PL	78-59-1	1
2-Methylnaphthalene	50	ug/L	1	SW8270C	06/06/13 16:45	PL	91-57-6	1
2-Methylphenol	45	ug/L	1	SW8270C	06/06/13 16:45	PL	95-48-7	1
3-, 4-Methylphenol	45	ug/L	1	SW8270C	06/06/13 16:45	PL	3/4-Cresol	1
2-Nitroaniline	50	ug/L	1	SW8270C	06/06/13 16:45	PL	88-74-4	1
2-Nitrophenol	48	ug/L	1	SW8270C	06/06/13 16:45	PL	88-75-5	1
3-Nitroaniline	36	ug/L	1	SW8270C	06/06/13 16:45	PL	99-09-2	1
4-Nitroaniline	45	ug/L	1	SW8270C	06/06/13 16:45	PL	100-01-6	1
4-Nitrophenol	40	ug/L	1	SW8270C	06/06/13 16:45	PL	100-02-7	1
N-Nitrosodi-n-propylamine	47	ug/L	1	SW8270C	06/06/13 16:45	PL	621-64-7	1
N-Nitrosodiphenylamine	49	ug/L	1	SW8270C	06/06/13 16:45	PL	86-30-6	1
Naphthalene	50	ug/L	1	SW8270C	06/06/13 16:45	PL	91-20-3	1
Nitrobenzene	44	ug/L	1	SW8270C	06/06/13 16:45	PL	98-95-3	1
di-n-Octyl phthalate	55	ug/L	1	SW8270C	06/06/13 16:45	PL	117-84-0	1
Pentachlorophenol	53	ug/L	1	SW8270C	06/06/13 16:45	PL	87-86-5	1
Phenanthrene	56	ug/L	1	SW8270C	06/06/13 16:45	PL	85-01-8	1
Phenol	30	ug/L	1	SW8270C	06/06/13 16:45	PL	108-95-2	1
Pyrene	57	ug/L	1	SW8270C	06/06/13 16:45	PL	129-00-0	1
2,4,5-Trichlorophenol	51	ug/L	1	SW8270C	06/06/13 16:45	PL	95-95-4	1

1-Sample spiked at 50 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S56648.03 (continued)
Sample Tag: MW-13-24 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	47	ug/L	1	SW8270C	06/06/13 16:45	PL	88-06-2	1
Hexachlorobenzene	54	ug/L	1	SW8270C	06/06/13 16:45	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	44	ug/L	5	SW8260B - SIM	06/06/13 20:37	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	53	ug/L	1	SW8260B	06/04/13 14:36	WAT	76-13-1	2
Acetone	62	ug/L	10	SW8260B	06/04/13 14:36	WAT	67-64-1	2
Carbon disulfide	43	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-15-0	2
Methyl Acetate	64	ug/L	10	SW8260B	06/04/13 14:36	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	56	ug/L	1	SW8260B	06/04/13 14:36	WAT	1634-04-4	2
2-Butanone (MEK)	57	ug/L	10	SW8260B	06/04/13 14:36	WAT	78-93-3	2
Dichlorodifluoromethane	37	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-71-8	2
Chloromethane	51	ug/L	1	SW8260B	06/04/13 14:36	WAT	74-87-3	2
Vinyl chloride	53	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-01-4	2
Bromomethane	60	ug/L	1	SW8260B	06/04/13 14:36	WAT	74-83-9	2
Chloroethane	65	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-00-3	2
Trichlorofluoromethane	57	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-69-4	2
1,1-Dichloroethene	51	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-35-4	2
Methylene chloride	52	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-09-2	2
trans-1,2-Dichloroethene	51	ug/L	1	SW8260B	06/04/13 14:36	WAT	156-60-5	2
1,1-Dichloroethane	54	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-34-3	2
cis-1,2-Dichloroethene	53	ug/L	1	SW8260B	06/04/13 14:36	WAT	156-59-2	2
Chloroform	53	ug/L	1	SW8260B	06/04/13 14:36	WAT	67-66-3	2
1,1,1-Trichloroethane	56	ug/L	1	SW8260B	06/04/13 14:36	WAT	71-55-6	2
Cyclohexane	52	ug/L	1	SW8260B	06/04/13 14:36	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	68	ug/L	10	SW8260B	06/04/13 14:36	WAT	108-10-1	2
2-Hexanone	66	ug/L	10	SW8260B	06/04/13 14:36	WAT	591-78-6	2
Carbon tetrachloride	54	ug/L	1	SW8260B	06/04/13 14:36	WAT	56-23-5	2
Benzene	55	ug/L	1	SW8260B	06/04/13 14:36	WAT	71-43-2	2
1,2-Dichloroethane	57	ug/L	1	SW8260B	06/04/13 14:36	WAT	107-06-2	2
Trichloroethene	53	ug/L	1	SW8260B	06/04/13 14:36	WAT	79-01-6	2
1,2-Dichloropropane	57	ug/L	1	SW8260B	06/04/13 14:36	WAT	78-87-5	2
Bromodichloromethane	57	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-27-4	2
Methyl cyclohexane	50	ug/L	1	SW8260B	06/04/13 14:36	WAT	108-87-2	2
cis-1,3-Dichloropropene	50	ug/L	1	SW8260B	06/04/13 14:36	WAT	10061-01-5	2
Toluene	52	ug/L	1	SW8260B	06/04/13 14:36	WAT	108-88-3	2
trans-1,3-Dichloropropene	50	ug/L	1	SW8260B	06/04/13 14:36	WAT	10061-02-6	2
1,1,2-Trichloroethane	59	ug/L	1	SW8260B	06/04/13 14:36	WAT	79-00-5	2
Tetrachloroethene	49	ug/L	1	SW8260B	06/04/13 14:36	WAT	127-18-4	2
Dibromochloromethane	47	ug/L	1	SW8260B	06/04/13 14:36	WAT	124-48-1	2
Chlorobenzene	49	ug/L	1	SW8260B	06/04/13 14:36	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	60	ug/L	1	SW8260B	06/04/13 14:36	WAT	79-34-5	2
Ethylbenzene	50	ug/L	1	SW8260B	06/04/13 14:36	WAT	100-41-4	2
p,m-Xylene	88	ug/L	2	SW8260B	06/04/13 14:36	WAT		2
o-Xylene	46	ug/L	1	SW8260B	06/04/13 14:36	WAT	95-47-6	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56648.03 (continued)
Sample Tag: MW-13-24 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	16	ug/L	1	SW8260B	06/04/13 14:36	WAT	100-42-5	1
Isopropylbenzene	48	ug/L	1	SW8260B	06/04/13 14:36	WAT	98-82-8	1
Bromoform	48	ug/L	1	SW8260B	06/04/13 14:36	WAT	75-25-2	1
1,3-Dichlorobenzene	52	ug/L	1	SW8260B	06/04/13 14:36	WAT	541-73-1	1
1,4-Dichlorobenzene	52	ug/L	1	SW8260B	06/04/13 14:36	WAT	106-46-7	1
1,2-Dichlorobenzene	51	ug/L	1	SW8260B	06/04/13 14:36	WAT	95-50-1	1
1,2,4-Trichlorobenzene	52	ug/L	1	SW8260B	06/04/13 14:36	WAT	120-82-1	1
1,2-Dibromoethane	55	ug/L	1	SW8260B	06/04/13 14:36	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	60	ug/L	1	SW8260B	06/04/13 14:36	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S56648.04
Sample Tag: Trip Blank
Collected Date/Time: 05/30/2013 00:01
Matrix: Groundwater
COC Reference: 74264

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/04/13 17:37	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/04/13 17:37	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/04/13 17:37	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/04/13 17:37	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/04/13 17:37	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/04/13 17:37	WAT		

Lab Sample ID: S56648.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/04/13 17:37	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

74264

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task#

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant Project#: B006448.0.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Prigge

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☑ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

MERIT LAB NO. (LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (wHg)	1,4 dioxane 8260 SIM	Special Instructions
566116 .01/.02/.03	05/30/13	16:30	MW-13-24	GW	18	X	X	X					9	6		3	X	MS MSD
.04	05/30/13	--	Trip Blank										1					

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS	☑ Sampler	DATE 05/30/13	TIME 17:45
RECEIVED BY: SIGNATURE/ORGANIZATION	PME		DATE 5/30/13	TIME 17:45
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME		DATE 5/30/13	TIME 18:15
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage		DATE 5/30/13	TIME 18:15

RELINQUISHED BY: SIGNATURE/ORGANIZATION		Mon	DATE 5-31-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust		DATE 5-31-13	TIME 930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL 5.0
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56666.01(01)
Generated on 06/17/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56666.01
Project: Lansing Plant 2 Project# B0064479.2013.00603
Collected Date: 05/31/2013
Submitted Date/Time: 05/31/2013 15:45
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56666.01	P2-MW-02	Groundwater	05/31/2013 13:45

Analytical Laboratory Report

Lab Sample ID: S56666.01
Sample Tag: P2-MW-02
Collected Date/Time: 05/31/2013 13:45
Matrix: Groundwater
COC Reference: 74249

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/14/13 14:38	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	06/14/13 14:38	PER	7440-38-2	
Barium, Dissolved	0.157	mg/L	0.010	SW6020	06/14/13 14:38	PER	7440-39-3	
Boron, Dissolved	0.04	mg/L	0.04	SW6020	06/14/13 14:38	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/14/13 14:38	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/14/13 14:38	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/14/13 14:38	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	06/14/13 14:38	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/14/13 14:38	PER	7439-92-1	
Manganese, Dissolved	0.061	mg/L	0.010	SW6020	06/14/13 14:38	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:22	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	SW6020	06/14/13 14:38	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	06/14/13 14:38	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/14/13 14:38	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/14/13 14:38	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	06/14/13 14:38	PER	7440-66-6	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74249

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task# 00603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 2 Project#: B006479.2013.0003

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villhauer

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE (YEAR 2013)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	~~PCBs~~	TAL Metals (w/Hg)	1,4 dioxane (SIMS)	Special Instructions
	~~5/31~~	~~8:40~~	~~Trip Blank~~	~~GW~~	~~2~~	~~2~~							X					
56666.01	5/31	13:45	P2-MW-02	GW	1			1							X			P2-MW-02 is field filtered

RELINQUISHED BY: SIGNATURE/ORGANIZATION	/PME	☒ Sampler	DATE 5/31/13 TIME 1500
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 5/31/13 TIME 1500
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Talbutt Feast		DATE 5/31/13 TIME 1545
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56667.01(01)
Generated on 06/17/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56667.01-S56667.03
Project: Lansing Plant Project# B0064480.2013
Collected Date: 05/31/2013
Submitted Date/Time: 05/31/2013 15:45
Sampled by: Robert Prigge
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56667.01	EB-8	Water	05/31/2013 11:20
S56667.02	MW-13-22	Groundwater	05/31/2013 14:45
S56667.03	Trip Blank	Water	05/31/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56667.01
Sample Tag: EB-8
Collected Date/Time: 05/31/2013 11:20
Matrix: Water
COC Reference: 74263

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/04/13 10:44	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 14:41	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/14/13 14:41	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/14/13 14:41	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/14/13 14:41	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:41	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:41	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:41	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 14:41	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 14:41	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/14/13 14:41	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:24	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 14:41	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:41	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:41	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 14:41	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 14:41	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	91-58-7	

Lab Sample ID: S56667.01 (continued)
Sample Tag: EB-8

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/06/13 17:18	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/06/13 17:18	PL	118-74-1	

Lab Sample ID: S56667.01 (continued)
Sample Tag: EB-8

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/04/13 17:57	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/04/13 17:57	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/04/13 17:57	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/04/13 17:57	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/04/13 17:57	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/04/13 17:57	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/04/13 17:57	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56667.02
Sample Tag: MW-13-22
Collected Date/Time: 05/31/2013 14:45
Matrix: Groundwater
COC Reference: 74263

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/03/13 11:40	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/04/13 10:44	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 14:43	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020	06/14/13 14:43	PER	7440-38-2	
Barium	0.039	mg/L	0.010	SW6020	06/14/13 14:43	PER	7440-39-3	
Boron	0.27	mg/L	0.04	SW6020	06/14/13 14:43	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:43	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:43	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:43	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/14/13 14:43	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/14/13 14:43	PER	7439-92-1	
Manganese	0.100	mg/L	0.010	SW6020	06/14/13 14:43	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/03/13 15:26	CCM	7439-97-6	
Nickel	0.022	mg/L	0.010	SW6020	06/14/13 14:43	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:43	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:43	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 14:43	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/14/13 14:43	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	91-58-7	

Lab Sample ID: S56667.02 (continued)
Sample Tag: MW-13-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 18:36	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	06/10/13 18:36	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 18:36	PL	118-74-1	

Lab Sample ID: S56667.02 (continued)
Sample Tag: MW-13-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	112	ug/L	5	SW8260B - SIM	06/10/13 14:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/03/13 17:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/03/13 17:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/03/13 17:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/03/13 17:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/03/13 17:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/03/13 17:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	120-82-1	

Lab Sample ID: S56667.02 (continued)
Sample Tag: MW-13-22

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/03/13 17:24	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56667.03
Sample Tag: Trip Blank
Collected Date/Time: 05/31/2013 00:01
Matrix: Water
COC Reference: 74263

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/04/13 10:44	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/03/13 17:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/03/13 17:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/03/13 17:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/03/13 17:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/03/13 17:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/03/13 17:44	WAT		

Lab Sample ID: S56667.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/03/13 17:44	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74263

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006448.0.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Prigge

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1,4 dioxane 8260 SIM					
SL6067.01	05/31/13	11:20	EB-8	W	6	X	X	X					3	2		1	3 Rep					
.02	05/31/13	14:45	MW-13-22	W	6	X	X	X					3	2		1	3					
.03	05/31/13	--	Trip blank	W	2		X						2									

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☒ Sampler DATE 05/31/13 TIME 15:05
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 5/31/13 TIME 1540

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tallulla Faust DATE 5/31/13 TIME 1545

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56670.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56670.01-S56670.02
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 05/31/2013
Submitted Date/Time: 06/03/2013 10:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56670.01	MW-03-02	Groundwater	05/31/2013 14:46
S56670.02	Trip Blank	Liquid	05/31/2013 08:40

Analytical Laboratory Report

Lab Sample ID: S56670.01
Sample Tag: MW-03-02
Collected Date/Time: 05/31/2013 14:46
Matrix: Groundwater
COC Reference: 74283

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
1	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/04/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/03/13 15:01	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 13:47	PER	7440-36-0	
Arsenic	0.010	mg/L	0.002	SW6020	06/17/13 13:47	PER	7440-38-2	
Barium	0.403	mg/L	0.010	SW6020	06/17/13 13:47	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	06/17/13 13:47	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 13:47	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 13:47	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 13:47	PER	7440-48-4	
Copper	0.065	mg/L	0.002	SW6020	06/17/13 13:47	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 13:47	PER	7439-92-1	
Manganese	0.116	mg/L	0.010	SW6020	06/17/13 13:47	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/04/13 15:04	CCM	7439-97-6	
Nickel	0.017	mg/L	0.010	SW6020	06/17/13 13:47	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020	06/17/13 13:47	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 13:47	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 13:47	PER	7440-62-2	
Zinc	0.011	mg/L	0.010	SW6020	06/17/13 13:47	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	91-58-7	

Lab Sample ID: S56670.01 (continued)
Sample Tag: MW-03-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 20:49	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 20:49	PL	118-74-1	

Lab Sample ID: S56670.01 (continued)
Sample Tag: MW-03-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	5	ug/L	1	SW8260B - SIM	06/03/13 19:15	WAT	123-91-1	B
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/04/13 18:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/04/13 18:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/04/13 18:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/04/13 18:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/04/13 18:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/04/13 18:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	95-50-1	

B-Compound also found in associated method blank

Lab Sample ID: S56670.01 (continued)
Sample Tag: MW-03-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/04/13 18:17	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56670.02
Sample Tag: Trip Blank
Collected Date/Time: 05/31/2013 08:40
Matrix: Liquid
COC Reference: 74283

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/04/13 18:37	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/04/13 18:37	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/04/13 18:37	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/04/13 18:37	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/04/13 18:37	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/04/13 18:37	WAT		

Lab Sample ID: S56670.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/04/13 18:37	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74283

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task#00 603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448 1.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stalker

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	Metals (wHg)	1-4 Dioxane (SIM)
56670.01	5/31	1446	MW-03-02	GW	6	2	3	1					X	X		X	X
02	5/31	0840	TRIP Blank	W	2								X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 5/31/13	TIME 1630
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage	DATE 5/31/13	TIME 1630
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6-3-13	TIME 900

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 6-3-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust	DATE 6/3/13	TIME 1020
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 6.0
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56678.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56678.01
Project: Lansing Plant 2 Project# B0064479.2013.00603
Collected Date: 06/03/2013
Submitted Date/Time: 06/04/2013 08:50
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56678.01	EQ-09	Groundwater	06/03/2013 12:15

Analytical Laboratory Report

Lab Sample ID: S56678.01
Sample Tag: EQ-09
Collected Date/Time: 06/03/2013 12:15
Matrix: Groundwater
COC Reference: 74248

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
1	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/04/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:56	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 13:49	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 13:49	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/17/13 13:49	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/17/13 13:49	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 13:49	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 13:49	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 13:49	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 13:49	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 13:49	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/17/13 13:49	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/04/13 15:10	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 13:49	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 13:49	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 13:49	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 13:49	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 13:49	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/10/13 23:04	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	91-58-7	

Lab Sample ID: S56678.01 (continued)
Sample Tag: EQ-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 23:04	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 23:04	PL	118-74-1	

Lab Sample ID: S56678.01 (continued)
Sample Tag: EQ-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 18:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/04/13 20:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/04/13 20:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/04/13 20:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/04/13 20:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/04/13 20:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/04/13 20:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	120-82-1	

Lab Sample ID: S56678.01 (continued)
Sample Tag: EQ-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/04/13 20:17	WAT	96-12-8	

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74248

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task#00803

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 2 Project#: B006479.2013.00003
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villaneal

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1,4 dioxane (SIMS)
	~~6/3~~	~~8:30~~	~~Trip blank~~	~~GW~~	2		2						X				
56678.01	6/3	12:15	EQ-09	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION		☒ Sampler	DATE	TIME
	ARCADIS/PME		6/3/13	18:10
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage		DATE 6/3/13	TIME 18:10
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	GW Lab		DATE 6.4.13	TIME 0850

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE 6/4/13	TIME 850

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56703.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56703.01
Project: Lansing Plant 3 Project# B0064480.2013.00603
Collected Date: 06/04/2013
Submitted Date/Time: 06/05/2013 10:00
Sampled by: Alex Villhauer
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56703.01	MW-02 (UNK-12)	Groundwater	06/04/2013 16:58

Analytical Laboratory Report

Lab Sample ID: S56703.01
Sample Tag: MW-02 (UNK-12)
Collected Date/Time: 06/04/2013 16:58
Matrix: Groundwater
COC Reference: 74246

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:50	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 13:45	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	06/17/13 13:45	PER	7440-38-2	
Barium	0.110	mg/L	0.010	SW6020	06/17/13 13:45	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/17/13 13:45	PER	7440-42-8	
Cadmium	0.0022	mg/L	0.0010	SW6020	06/17/13 13:45	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 13:45	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 13:45	PER	7440-48-4	
Copper	0.014	mg/L	0.002	SW6020	06/17/13 13:45	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 13:45	PER	7439-92-1	
Manganese	0.151	mg/L	0.010	SW6020	06/17/13 13:45	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:14	CCM	7439-97-6	
Nickel	0.010	mg/L	0.010	SW6020	06/17/13 13:45	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 13:45	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 13:45	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 13:45	PER	7440-62-2	
Zinc	0.100	mg/L	0.010	SW6020	06/17/13 13:45	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	91-58-7	

Lab Sample ID: S56703.01 (continued)
Sample Tag: MW-02 (UNK-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 13:34	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 13:34	PL	118-74-1	

Lab Sample ID: S56703.01 (continued)
Sample Tag: MW-02 (UNK-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 15:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 20:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 20:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 20:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 20:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 20:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 20:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	120-82-1	

Lab Sample ID: S56703.01 (continued)
Sample Tag: MW-02 (UNK-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 20:48	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74246

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task#00603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B0064480.2013.00003

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villhauer

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE (YEAR 2013)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1,4 dioxane (SIMS)
567031-01	6/4	16:58	MW-02 (UNK-12)	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME	☒ Sampler DATE 6/4/13	TIME 18:40
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage	DATE 6/4/13	TIME 18:49
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Mod	DATE 6-5-13	TIME 855

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Mod	DATE 6-5-13	TIME 1000
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabitha Fant	DATE 6-5-13	TIME 1000

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56704.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56704.01-S56704.05
Project: Lansing Plant Project# B0064480.2013
Collected Date: 06/03/2013 - 06/04/2013
Submitted Date/Time: 06/05/2013 10:00
Sampled by: Robert Prigge
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56704.01	MW-06 (3)	Groundwater	06/03/2013 10:14
S56704.02	MW-01 (3)	Groundwater	06/03/2013 13:00
S56704.03	Trip Blank	Water	06/03/2013 00:01
S56704.04	UNK-11	Groundwater	06/04/2013 12:05
S56704.05	EB-10	Water	06/04/2013 16:50

Analytical Laboratory Report

Lab Sample ID: S56704.01
Sample Tag: MW-06 (3)
Collected Date/Time: 06/03/2013 10:14
Matrix: Groundwater
COC Reference: 74262

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:50	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 13:56	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 13:56	PER	7440-38-2	
Barium	0.039	mg/L	0.010	SW6020	06/17/13 13:56	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	06/17/13 13:56	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 13:56	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 13:56	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 13:56	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 13:56	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 13:56	PER	7439-92-1	
Manganese	0.211	mg/L	0.010	SW6020	06/17/13 13:56	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:24	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 13:56	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 13:56	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 13:56	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 13:56	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 13:56	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	91-58-7	

Lab Sample ID: S56704.01 (continued)
Sample Tag: MW-06 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 14:08	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 14:08	PL	118-74-1	

Lab Sample ID: S56704.01 (continued)
Sample Tag: MW-06 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 18:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 21:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 21:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 21:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	156-60-5	
1,1-Dichloroethane	4	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	67-66-3	
1,1,1-Trichloroethane	38	ug/L	1	SW8260B	06/06/13 21:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 21:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 21:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 21:08	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	120-82-1	

Lab Sample ID: S56704.01 (continued)
Sample Tag: MW-06 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 21:08	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56704.02
Sample Tag: MW-01 (3)
Collected Date/Time: 06/03/2013 13:00
Matrix: Groundwater
COC Reference: 74262

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:50	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 14:02	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	06/17/13 14:02	PER	7440-38-2	
Barium	0.097	mg/L	0.010	SW6020	06/17/13 14:02	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/17/13 14:02	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 14:02	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 14:02	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 14:02	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 14:02	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 14:02	PER	7439-92-1	
Manganese	0.144	mg/L	0.010	SW6020	06/17/13 14:02	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:26	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 14:02	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 14:02	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 14:02	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 14:02	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 14:02	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	91-58-7	

Lab Sample ID: S56704.02 (continued)
Sample Tag: MW-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 14:41	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	06/10/13 14:41	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 14:41	PL	118-74-1	

Lab Sample ID: S56704.02 (continued)
Sample Tag: MW-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 18:47	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 21:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 21:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 21:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 21:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 21:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 21:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	120-82-1	

Lab Sample ID: S56704.02 (continued)
Sample Tag: MW-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 21:28	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56704.03
Sample Tag: Trip Blank
Collected Date/Time: 06/03/2013 00:01
Matrix: Water
COC Reference: 74262

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:50	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 18:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 18:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 18:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 18:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 18:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 18:08	WAT		

Lab Sample ID: S56704.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 18:08	WAT	96-12-8	

Lab Sample ID: S56704.04
Sample Tag: UNK-11
Collected Date/Time: 06/04/2013 12:05
Matrix: Groundwater
COC Reference: 74262

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:50	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 14:42	PER	7440-36-0	
Arsenic	0.015	mg/L	0.002	SW6020	06/17/13 14:42	PER	7440-38-2	
Barium	0.080	mg/L	0.010	SW6020	06/17/13 14:42	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/17/13 14:42	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 14:42	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 14:42	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 14:42	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 14:42	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 14:42	PER	7439-92-1	
Manganese	0.224	mg/L	0.010	SW6020	06/17/13 14:42	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:28	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 14:42	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 14:42	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 14:42	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 14:42	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 14:42	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	91-58-7	

Lab Sample ID: S56704.04 (continued)
Sample Tag: UNK-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 15:15	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 15:15	PL	118-74-1	

Lab Sample ID: S56704.04 (continued)
Sample Tag: UNK-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 19:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 21:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 21:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 21:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	71-55-6	
Cyclohexane	1	ug/L	1	SW8260B	06/06/13 21:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 21:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 21:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 21:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	100-42-5	
Isopropylbenzene	1	ug/L	1	SW8260B	06/06/13 21:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	120-82-1	

Lab Sample ID: S56704.04 (continued)
Sample Tag: UNK-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 21:48	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56704.05
Sample Tag: EB-10
Collected Date/Time: 06/04/2013 16:50
Matrix: Water
COC Reference: 74262

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:50	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 14:40	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 14:40	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/17/13 14:40	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/17/13 14:40	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 14:40	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 14:40	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 14:40	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 14:40	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 14:40	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/17/13 14:40	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:30	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 14:40	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 14:40	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 14:40	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 14:40	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 14:40	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	91-58-7	

Lab Sample ID: S56704.05 (continued)
Sample Tag: EB-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 15:49	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	06/10/13 15:49	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 15:49	PL	118-74-1	

Lab Sample ID: S56704.05 (continued)
Sample Tag: EB-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 18:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 18:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 18:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 18:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 18:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 18:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 18:28	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74262

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B00644 80.2013.
SAMPLER(S) PLEASE PRINT/SIGN NAME: Robert Frigge

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1,4 dioxane 8260 SIM
56704.01	06/03/13	10:14	MW-06 (3)	gw	6	X	X	X					3	2		1	3
.02	06/03/13	13:00	MW-01 (3)	gw	6	X	X	X					3	2		1	3
.03	--	--	Trip blank	w	2		X						2				
.04	06/04/13	12:05	UNK-11	gw	6	X	X	X					3	2		1	3
.05	06/04/13	16:50	EB-10	w	6	X	X	X					3	2		1	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS ☐Sampler	DATE 06/04/13	TIME 17:55
RECEIVED BY: SIGNATURE/ORGANIZATION	PME	DATE 6/4/13	TIME 17:55
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME	DATE 6/4/13	TIME 18:40
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage	DATE 6/4/13	TIME 18:40

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 6-5-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust	DATE 6-5-13	TIME 1000

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56705.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56705.01-S56705.03
Project: Lansing Plant 6 Project# B0064481.2013.00603
Collected Date: 06/04/2013
Submitted Date/Time: 06/05/2013 10:00
Sampled by: Alex Villhauer
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56705.01	Trip Blank	Groundwater	06/04/2013 08:30
S56705.02	MWBP-12-UST-5-6	Groundwater	06/04/2013 12:59
S56705.03	MWBP-10-UST-5-6	Groundwater	06/04/2013 15:00

Analytical Laboratory Report

Lab Sample ID: S56705.01
Sample Tag: Trip Blank
Collected Date/Time: 06/04/2013 08:30
Matrix: Groundwater
COC Reference: 74247

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:50	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 18:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 18:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 18:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 18:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 18:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 18:48	WAT		

Lab Sample ID: S56705.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 18:48	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56705.02
Sample Tag: MWBP-12-UST-5-6
Collected Date/Time: 06/04/2013 12:59
Matrix: Groundwater
COC Reference: 74247

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:50	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 14:44	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020	06/17/13 14:44	PER	7440-38-2	
Barium	0.075	mg/L	0.010	SW6020	06/17/13 14:44	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/17/13 14:44	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 14:44	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 14:44	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 14:44	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 14:44	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 14:44	PER	7439-92-1	
Manganese	0.241	mg/L	0.010	SW6020	06/17/13 14:44	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:32	CCM	7439-97-6	
Nickel	0.014	mg/L	0.010	SW6020	06/17/13 14:44	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 14:44	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 14:44	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 14:44	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 14:44	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	91-58-7	

Lab Sample ID: S56705.02 (continued)
Sample Tag: MWBP-12-UST-5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 16:22	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 16:22	PL	118-74-1	

Lab Sample ID: S56705.02 (continued)
Sample Tag: MWBP-12-UST-5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 19:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 22:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 22:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 22:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 22:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 22:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 22:08	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	120-82-1	

Lab Sample ID: S56705.02 (continued)
Sample Tag: MWBP-12-UST-5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 22:08	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56705.03
Sample Tag: MWBP-10-UST-5-6
Collected Date/Time: 06/04/2013 15:00
Matrix: Groundwater
COC Reference: 74247

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 10:55	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 14:46	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	06/17/13 14:46	PER	7440-38-2	
Barium	0.245	mg/L	0.010	SW6020	06/17/13 14:46	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	06/17/13 14:46	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 14:46	PER	7440-43-9	
Chromium	0.010	mg/L	0.010	SW6020	06/17/13 14:46	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 14:46	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	06/17/13 14:46	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 14:46	PER	7439-92-1	
Manganese	0.400	mg/L	0.010	SW6020	06/17/13 14:46	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:34	CCM	7439-97-6	
Nickel	0.011	mg/L	0.010	SW6020	06/17/13 14:46	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 14:46	PER	7782-49-2	
Silver	0.0007	mg/L	0.0005	SW6020	06/17/13 14:46	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 14:46	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 14:46	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	84-74-2	
Benzaldehyde	2	ug/L	1	SW8270C	06/12/13 14:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	91-58-7	

Lab Sample ID: S56705.03 (continued)
Sample Tag: MWBP-10-UST-5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 14:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 14:12	PL	118-74-1	

Lab Sample ID: S56705.03 (continued)
Sample Tag: MWBP-10-UST-5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 19:53	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 22:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 22:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	2	ug/L	1	SW8260B	06/06/13 22:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 22:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 22:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 22:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 22:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	120-82-1	

Lab Sample ID: S56705.03 (continued)
Sample Tag: MWBP-10-UST-5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 22:28	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74247

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant C Project#: B006448.1.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villeneuve

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs: TCL	SVOCs: TCL	PCBs	Metals (wHg): TAL	1,4 dioxane (SIMS)
560705.01	6/4	8:30	Trip blank	GW	2		2						X				
.02	6/4	12:59	MWBP-12-UST-5-6	GW	6	2	3	1					X	X		X	X
.03	6/4	15:09	MWBP-10-UST-5-6	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: /PME ☒ Sampler DATE: 6/4/13 TIME: 18:40
RECEIVED BY: SIGNATURE/ORGANIZATION: PM Storage DATE: 6/4/13 TIME: 18:40
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: MW DATE: 6-5-13 TIME: 855

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 6-5-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 6-5-13 TIME: 1000

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56706.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56706.01-S56706.05
Project: Lansing Plant Project# B0064480.2013.00603
Collected Date: 06/04/2013
Submitted Date/Time: 06/05/2013 10:00
Sampled by: Joseph Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56706.01	Trip Blank	Liquid	06/04/2013 00:01
S56706.02	UNK-15	Groundwater	06/04/2013 12:30
S56706.03	MW-19	Groundwater	06/04/2013 16:21
S56706.04	MW-19 MS	Groundwater	06/04/2013 16:21
S56706.05	MW-19 MSD	Groundwater	06/04/2013 16:21

Analytical Laboratory Report

Lab Sample ID: S56706.01
Sample Tag: Trip Blank
Collected Date/Time: 06/04/2013 00:01
Matrix: Liquid
COC Reference: 74278

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/12/13 10:43	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/11/13 16:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/11/13 16:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/11/13 16:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/11/13 16:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/11/13 16:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/11/13 16:08	WAT		

Lab Sample ID: S56706.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/11/13 16:08	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56706.02
Sample Tag: UNK-15
Collected Date/Time: 06/04/2013 12:30
Matrix: Groundwater
COC Reference: 74278

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 14:56	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 14:56	PER	7440-38-2	
Barium	0.027	mg/L	0.010	SW6020	06/17/13 14:56	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	06/17/13 14:56	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 14:56	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 14:56	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 14:56	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 14:56	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 14:56	PER	7439-92-1	
Manganese	0.057	mg/L	0.010	SW6020	06/17/13 14:56	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:36	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 14:56	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 14:56	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 14:56	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 14:56	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 14:56	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	91-58-7	

Lab Sample ID: S56706.02 (continued)
Sample Tag: UNK-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 14:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 14:46	PL	118-74-1	

Lab Sample ID: S56706.02 (continued)
Sample Tag: UNK-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 15:22	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/11/13 16:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/11/13 16:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/11/13 16:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/11/13 16:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/11/13 16:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/11/13 16:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	120-82-1	

Lab Sample ID: S56706.02 (continued)
Sample Tag: UNK-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/11/13 16:49	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56706.03
Sample Tag: MW-19
Collected Date/Time: 06/04/2013 16:21
Matrix: Groundwater
COC Reference: 74278

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR
1	250ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	06/05/13 13:50	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 15:30	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 15:30	PER	7440-38-2	
Barium	0.052	mg/L	0.010	SW6020	06/17/13 15:30	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	06/17/13 15:30	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 15:30	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 15:30	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 15:30	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	06/17/13 15:30	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 15:30	PER	7439-92-1	
Manganese	0.039	mg/L	0.010	SW6020	06/17/13 15:30	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:42	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 15:30	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 15:30	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 15:30	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 15:30	PER	7440-62-2	
Zinc	0.032	mg/L	0.010	SW6020	06/17/13 15:30	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	205-99-2	

Lab Sample ID: S56706.03 (continued)
Sample Tag: MW-19

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 16:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	129-00-0	

Lab Sample ID: S56706.03 (continued)
Sample Tag: MW-19

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 16:56	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 15:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/11/13 17:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/11/13 17:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/11/13 17:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/11/13 17:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/11/13 17:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/11/13 17:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	100-42-5	

Lab Sample ID: S56706.03 (continued)
Sample Tag: MW-19

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/11/13 17:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56706.04
Sample Tag: MW-19 MS
Collected Date/Time: 06/04/2013 16:21
Matrix: Groundwater
COC Reference: 74278

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR
1	250ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Inorganics								
Chromium VI	0.213	mg/L	0.01	3500-Cr B	06/05/13 14:00	JKB	18540-29-9	
Metals								
Antimony	0.249	mg/L	0.002	SW6020	06/17/13 15:32	PER	7440-36-0	
Arsenic	0.251	mg/L	0.002	SW6020	06/17/13 15:32	PER	7440-38-2	
Barium	0.298	mg/L	0.010	SW6020	06/17/13 15:32	PER	7440-39-3	
Boron	0.26	mg/L	0.04	SW6020	06/17/13 15:32	PER	7440-42-8	
Cadmium	0.256	mg/L	0.0010	SW6020	06/17/13 15:32	PER	7440-43-9	
Chromium	0.242	mg/L	0.010	SW6020	06/17/13 15:32	PER	7440-47-3	
Cobalt	0.241	mg/L	0.010	SW6020	06/17/13 15:32	PER	7440-48-4	
Copper	0.239	mg/L	0.002	SW6020	06/17/13 15:32	PER	7440-50-8	
Lead	0.245	mg/L	0.002	SW6020	06/17/13 15:32	PER	7439-92-1	
Manganese	0.283	mg/L	0.010	SW6020	06/17/13 15:32	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	06/06/13 16:44	CCM	7439-97-6	
Nickel	0.247	mg/L	0.010	SW6020	06/17/13 15:32	PER	7440-02-0	
Selenium	0.258	mg/L	0.005	SW6020	06/17/13 15:32	PER	7782-49-2	
Silver	0.240	mg/L	0.0005	SW6020	06/17/13 15:32	PER	7440-22-4	
Vanadium	0.239	mg/L	0.002	SW6020	06/17/13 15:32	PER	7440-62-2	
Zinc	0.273	mg/L	0.010	SW6020	06/17/13 15:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	29	ug/L	1	SW8270C	06/10/13 17:29	PL	83-32-9	1
Acenaphthylene	28	ug/L	1	SW8270C	06/10/13 17:29	PL	208-96-8	1
Acetophenone	25	ug/L	1	SW8270C	06/10/13 17:29	PL	98-86-2	1
Anthracene	30	ug/L	1	SW8270C	06/10/13 17:29	PL	120-12-7	1
Atrazine	18	ug/L	1	SW8270C	06/10/13 17:29	PL	1912-24-9	1
1,1'-Biphenyl	24	ug/L	1	SW8270C	06/10/13 17:29	PL	92-52-4	1
4-Bromophenyl phenyl ether	25	ug/L	1	SW8270C	06/10/13 17:29	PL	101-55-3	1
di-n-Butyl phthalate	31	ug/L	1	SW8270C	06/10/13 17:29	PL	84-74-2	1
Benzaldehyde	21	ug/L	1	SW8270C	06/10/13 17:29	PL	100-52-7	1
Benzo(a)anthracene	29	ug/L	1	SW8270C	06/10/13 17:29	PL	56-55-3	1
Benzo(a)pyrene	35	ug/L	1	SW8270C	06/10/13 17:29	PL	50-32-8	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S56706.04 (continued)
Sample Tag: MW-19 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(b)fluoranthene	36	ug/L	1	SW8270C	06/10/13 17:29	PL	205-99-2	1
Benzo(ghi)perylene	22	ug/L	1	SW8270C	06/10/13 17:29	PL	191-24-2	1
Benzo(k)fluoranthene	34	ug/L	1	SW8270C	06/10/13 17:29	PL	207-08-9	1
Butyl benzyl phthalate	29	ug/L	1	SW8270C	06/10/13 17:29	PL	85-68-7	1
2-Chloronaphthalene	24	ug/L	1	SW8270C	06/10/13 17:29	PL	91-58-7	1
2-Chlorophenol	23	ug/L	1	SW8270C	06/10/13 17:29	PL	95-57-8	1
4-Chloro-3-methylphenol	26	ug/L	1	SW8270C	06/10/13 17:29	PL	59-50-7	1
4-Chloroaniline	6	ug/L	1	SW8270C	06/10/13 17:29	PL	106-47-8	1
4-Chlorophenyl phenyl ether	25	ug/L	1	SW8270C	06/10/13 17:29	PL	7005-72-3	1
Caprolactam	4	ug/L	1	SW8270C	06/10/13 17:29	PL	105-60-2	1
Carbazole	28	ug/L	1	SW8270C	06/10/13 17:29	PL	86-74-8	1
bis(2-Chloroethoxy)methane	26	ug/L	1	SW8270C	06/10/13 17:29	PL	111-91-1	1
bis(2-Chloroethyl)ether	22	ug/L	1	SW8270C	06/10/13 17:29	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	24	ug/L	1	SW8270C	06/10/13 17:29	PL	108-60-1	1
Chrysene	33	ug/L	1	SW8270C	06/10/13 17:29	PL	218-01-9	1
2,4-Dichlorophenol	26	ug/L	1	SW8270C	06/10/13 17:29	PL	120-83-2	1
2,4-Dimethylphenol	27	ug/L	1	SW8270C	06/10/13 17:29	PL	105-67-9	1
2,4-Dinitrophenol	19	ug/L	1	SW8270C	06/10/13 17:29	PL	51-28-5	1
2,4-Dinitrotoluene	25	ug/L	1	SW8270C	06/10/13 17:29	PL	121-14-2	1
2,6-Dinitrotoluene	26	ug/L	1	SW8270C	06/10/13 17:29	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	21	ug/L	1	SW8270C	06/10/13 17:29	PL	534-52-1	1
Dibenzo(ah)anthracene	24	ug/L	2	SW8270C	06/10/13 17:29	PL	53-70-3	1
Dibenzofuran	29	ug/L	1	SW8270C	06/10/13 17:29	PL	132-64-9	1
Diethyl phthalate	29	ug/L	1	SW8270C	06/10/13 17:29	PL	84-66-2	1
Dimethyl phthalate	26	ug/L	1	SW8270C	06/10/13 17:29	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	32	ug/L	1	SW8270C	06/10/13 17:29	PL	117-81-7	1
Fluoranthene	30	ug/L	1	SW8270C	06/10/13 17:29	PL	206-44-0	1
Fluorene	29	ug/L	1	SW8270C	06/10/13 17:29	PL	86-73-7	1
Hexachlorobutadiene	24	ug/L	1	SW8270C	06/10/13 17:29	PL	87-68-3	1
Hexachlorocyclopentadiene	28	ug/L	1	SW8270C	06/10/13 17:29	PL	77-47-4	1
Hexachloroethane	21	ug/L	1	SW8270C	06/10/13 17:29	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	24	ug/L	1	SW8270C	06/10/13 17:29	PL	193-39-5	1
Isophorone	33	ug/L	1	SW8270C	06/10/13 17:29	PL	78-59-1	1
2-Methylnaphthalene	27	ug/L	1	SW8270C	06/10/13 17:29	PL	91-57-6	1
2-Methylphenol	24	ug/L	1	SW8270C	06/10/13 17:29	PL	95-48-7	1
3-, 4-Methylphenol	24	ug/L	1	SW8270C	06/10/13 17:29	PL	3/4-Cresol	1
2-Nitroaniline	25	ug/L	1	SW8270C	06/10/13 17:29	PL	88-74-4	1
2-Nitrophenol	25	ug/L	1	SW8270C	06/10/13 17:29	PL	88-75-5	1
3-Nitroaniline	16	ug/L	1	SW8270C	06/10/13 17:29	PL	99-09-2	1
4-Nitroaniline	20	ug/L	1	SW8270C	06/10/13 17:29	PL	100-01-6	1
4-Nitrophenol	18	ug/L	1	SW8270C	06/10/13 17:29	PL	100-02-7	1
N-Nitrosodi-n-propylamine	26	ug/L	1	SW8270C	06/10/13 17:29	PL	621-64-7	1
N-Nitrosodiphenylamine	25	ug/L	1	SW8270C	06/10/13 17:29	PL	86-30-6	1
Naphthalene	28	ug/L	1	SW8270C	06/10/13 17:29	PL	91-20-3	1
Nitrobenzene	24	ug/L	1	SW8270C	06/10/13 17:29	PL	98-95-3	1
di-n-Octyl phthalate	32	ug/L	1	SW8270C	06/10/13 17:29	PL	117-84-0	1
Pentachlorophenol	22	ug/L	1	SW8270C	06/10/13 17:29	PL	87-86-5	1
Phenanthrene	29	ug/L	1	SW8270C	06/10/13 17:29	PL	85-01-8	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S56706.04 (continued)
Sample Tag: MW-19 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenol	15	ug/L	1	SW8270C	06/10/13 17:29	PL	108-95-2	1
Pyrene	31	ug/L	1	SW8270C	06/10/13 17:29	PL	129-00-0	1
2,4,5-Trichlorophenol	26	ug/L	1	SW8270C	06/10/13 17:29	PL	95-95-4	1
2,4,6-Trichlorophenol	23	ug/L	1	SW8270C	06/10/13 17:29	PL	88-06-2	1
Hexachlorobenzene	28	ug/L	1	SW8270C	06/10/13 17:29	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	46	ug/L	5	SW8260B - SIM	06/07/13 19:24	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	44	ug/L	1	SW8260B	06/11/13 22:16	WAT	76-13-1	2
Acetone	39	ug/L	10	SW8260B	06/11/13 22:16	WAT	67-64-1	2
Carbon disulfide	44	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-15-0	2
Methyl Acetate	46	ug/L	10	SW8260B	06/11/13 22:16	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	49	ug/L	1	SW8260B	06/11/13 22:16	WAT	1634-04-4	2
2-Butanone (MEK)	44	ug/L	10	SW8260B	06/11/13 22:16	WAT	78-93-3	2
Dichlorodifluoromethane	41	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-71-8	2
Chloromethane	44	ug/L	1	SW8260B	06/11/13 22:16	WAT	74-87-3	2
Vinyl chloride	45	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-01-4	2
Bromomethane	46	ug/L	1	SW8260B	06/11/13 22:16	WAT	74-83-9	2
Chloroethane	45	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-00-3	2
Trichlorofluoromethane	44	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-69-4	2
1,1-Dichloroethene	43	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-35-4	2
Methylene chloride	44	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-09-2	2
trans-1,2-Dichloroethene	45	ug/L	1	SW8260B	06/11/13 22:16	WAT	156-60-5	2
1,1-Dichloroethane	46	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-34-3	2
cis-1,2-Dichloroethene	46	ug/L	1	SW8260B	06/11/13 22:16	WAT	156-59-2	2
Chloroform	46	ug/L	1	SW8260B	06/11/13 22:16	WAT	67-66-3	2
1,1,1-Trichloroethane	43	ug/L	1	SW8260B	06/11/13 22:16	WAT	71-55-6	2
Cyclohexane	43	ug/L	1	SW8260B	06/11/13 22:16	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	51	ug/L	10	SW8260B	06/11/13 22:16	WAT	108-10-1	2
2-Hexanone	50	ug/L	10	SW8260B	06/11/13 22:16	WAT	591-78-6	2
Carbon tetrachloride	43	ug/L	1	SW8260B	06/11/13 22:16	WAT	56-23-5	2
Benzene	45	ug/L	1	SW8260B	06/11/13 22:16	WAT	71-43-2	2
1,2-Dichloroethane	47	ug/L	1	SW8260B	06/11/13 22:16	WAT	107-06-2	2
Trichloroethene	45	ug/L	1	SW8260B	06/11/13 22:16	WAT	79-01-6	2
1,2-Dichloropropane	47	ug/L	1	SW8260B	06/11/13 22:16	WAT	78-87-5	2
Bromodichloromethane	43	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-27-4	2
Methyl cyclohexane	43	ug/L	1	SW8260B	06/11/13 22:16	WAT	108-87-2	2
cis-1,3-Dichloropropene	44	ug/L	1	SW8260B	06/11/13 22:16	WAT	10061-01-5	2
Toluene	46	ug/L	1	SW8260B	06/11/13 22:16	WAT	108-88-3	2
trans-1,3-Dichloropropene	45	ug/L	1	SW8260B	06/11/13 22:16	WAT	10061-02-6	2
1,1,2-Trichloroethane	49	ug/L	1	SW8260B	06/11/13 22:16	WAT	79-00-5	2
Tetrachloroethene	45	ug/L	1	SW8260B	06/11/13 22:16	WAT	127-18-4	2
Dibromochloromethane	44	ug/L	1	SW8260B	06/11/13 22:16	WAT	124-48-1	2
Chlorobenzene	47	ug/L	1	SW8260B	06/11/13 22:16	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	51	ug/L	1	SW8260B	06/11/13 22:16	WAT	79-34-5	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56706.04 (continued)
Sample Tag: MW-19 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	48	ug/L	1	SW8260B	06/11/13 22:16	WAT	100-41-4	1
p,m-Xylene	99	ug/L	2	SW8260B	06/11/13 22:16	WAT		1
o-Xylene	50	ug/L	1	SW8260B	06/11/13 22:16	WAT	95-47-6	1
Styrene	51	ug/L	1	SW8260B	06/11/13 22:16	WAT	100-42-5	1
Isopropylbenzene	48	ug/L	1	SW8260B	06/11/13 22:16	WAT	98-82-8	1
Bromoform	48	ug/L	1	SW8260B	06/11/13 22:16	WAT	75-25-2	1
1,3-Dichlorobenzene	50	ug/L	1	SW8260B	06/11/13 22:16	WAT	541-73-1	1
1,4-Dichlorobenzene	47	ug/L	1	SW8260B	06/11/13 22:16	WAT	106-46-7	1
1,2-Dichlorobenzene	48	ug/L	1	SW8260B	06/11/13 22:16	WAT	95-50-1	1
1,2,4-Trichlorobenzene	51	ug/L	1	SW8260B	06/11/13 22:16	WAT	120-82-1	1
1,2-Dibromoethane	50	ug/L	1	SW8260B	06/11/13 22:16	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	49	ug/L	1	SW8260B	06/11/13 22:16	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S56706.05
Sample Tag: MW-19 MSD
Collected Date/Time: 06/04/2013 16:21
Matrix: Groundwater
COC Reference: 74278

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR
1	250ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Inorganics								
Chromium VI	0.205	mg/L	0.01	3500-Cr B	06/05/13 14:05	JKB	18540-29-9	
Metals								
Antimony	0.258	mg/L	0.002	SW6020	06/17/13 15:34	PER	7440-36-0	
Arsenic	0.267	mg/L	0.002	SW6020	06/17/13 15:34	PER	7440-38-2	
Barium	0.305	mg/L	0.010	SW6020	06/17/13 15:34	PER	7440-39-3	
Boron	0.27	mg/L	0.04	SW6020	06/17/13 15:34	PER	7440-42-8	
Cadmium	0.254	mg/L	0.0010	SW6020	06/17/13 15:34	PER	7440-43-9	
Chromium	0.251	mg/L	0.010	SW6020	06/17/13 15:34	PER	7440-47-3	
Cobalt	0.246	mg/L	0.010	SW6020	06/17/13 15:34	PER	7440-48-4	
Copper	0.249	mg/L	0.002	SW6020	06/17/13 15:34	PER	7440-50-8	
Lead	0.246	mg/L	0.002	SW6020	06/17/13 15:34	PER	7439-92-1	
Manganese	0.286	mg/L	0.010	SW6020	06/17/13 15:34	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	06/06/13 16:46	CCM	7439-97-6	
Nickel	0.252	mg/L	0.010	SW6020	06/17/13 15:34	PER	7440-02-0	
Selenium	0.285	mg/L	0.005	SW6020	06/17/13 15:34	PER	7782-49-2	
Silver	0.245	mg/L	0.0005	SW6020	06/17/13 15:34	PER	7440-22-4	
Vanadium	0.252	mg/L	0.002	SW6020	06/17/13 15:34	PER	7440-62-2	
Zinc	0.288	mg/L	0.010	SW6020	06/17/13 15:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	43	ug/L	1	SW8270C	06/10/13 18:03	PL	83-32-9	1
Acenaphthylene	41	ug/L	1	SW8270C	06/10/13 18:03	PL	208-96-8	1
Acetophenone	35	ug/L	1	SW8270C	06/10/13 18:03	PL	98-86-2	1
Anthracene	42	ug/L	1	SW8270C	06/10/13 18:03	PL	120-12-7	1
Atrazine	11	ug/L	1	SW8270C	06/10/13 18:03	PL	1912-24-9	1
1,1'-Biphenyl	36	ug/L	1	SW8270C	06/10/13 18:03	PL	92-52-4	1
4-Bromophenyl phenyl ether	36	ug/L	1	SW8270C	06/10/13 18:03	PL	101-55-3	1
di-n-Butyl phthalate	45	ug/L	1	SW8270C	06/10/13 18:03	PL	84-74-2	1
Benzaldehyde	32	ug/L	1	SW8270C	06/10/13 18:03	PL	100-52-7	1
Benzo(a)anthracene	41	ug/L	1	SW8270C	06/10/13 18:03	PL	56-55-3	1
Benzo(a)pyrene	50	ug/L	1	SW8270C	06/10/13 18:03	PL	50-32-8	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S56706.05 (continued)
Sample Tag: MW-19 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(b)fluoranthene	51	ug/L	1	SW8270C	06/10/13 18:03	PL	205-99-2	1
Benzo(ghi)perylene	31	ug/L	1	SW8270C	06/10/13 18:03	PL	191-24-2	1
Benzo(k)fluoranthene	48	ug/L	1	SW8270C	06/10/13 18:03	PL	207-08-9	1
Butyl benzyl phthalate	40	ug/L	1	SW8270C	06/10/13 18:03	PL	85-68-7	1
2-Chloronaphthalene	35	ug/L	1	SW8270C	06/10/13 18:03	PL	91-58-7	1
2-Chlorophenol	28	ug/L	1	SW8270C	06/10/13 18:03	PL	95-57-8	1
4-Chloro-3-methylphenol	36	ug/L	1	SW8270C	06/10/13 18:03	PL	59-50-7	1
4-Chloroaniline	4	ug/L	1	SW8270C	06/10/13 18:03	PL	106-47-8	1
4-Chlorophenyl phenyl ether	37	ug/L	1	SW8270C	06/10/13 18:03	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270C	06/10/13 18:03	PL	105-60-2	1
Carbazole	40	ug/L	1	SW8270C	06/10/13 18:03	PL	86-74-8	1
bis(2-Chloroethoxy)methane	35	ug/L	1	SW8270C	06/10/13 18:03	PL	111-91-1	1
bis(2-Chloroethyl)ether	31	ug/L	1	SW8270C	06/10/13 18:03	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	36	ug/L	1	SW8270C	06/10/13 18:03	PL	108-60-1	1
Chrysene	46	ug/L	1	SW8270C	06/10/13 18:03	PL	218-01-9	1
2,4-Dichlorophenol	34	ug/L	1	SW8270C	06/10/13 18:03	PL	120-83-2	1
2,4-Dimethylphenol	39	ug/L	1	SW8270C	06/10/13 18:03	PL	105-67-9	1
2,4-Dinitrophenol	25	ug/L	1	SW8270C	06/10/13 18:03	PL	51-28-5	1
2,4-Dinitrotoluene	39	ug/L	1	SW8270C	06/10/13 18:03	PL	121-14-2	1
2,6-Dinitrotoluene	38	ug/L	1	SW8270C	06/10/13 18:03	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	27	ug/L	1	SW8270C	06/10/13 18:03	PL	534-52-1	1
Dibenzo(ah)anthracene	33	ug/L	2	SW8270C	06/10/13 18:03	PL	53-70-3	1
Dibenzofuran	42	ug/L	1	SW8270C	06/10/13 18:03	PL	132-64-9	1
Diethyl phthalate	42	ug/L	2	SW8270C	06/10/13 18:03	PL	84-66-2	1
Dimethyl phthalate	37	ug/L	1	SW8270C	06/10/13 18:03	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	47	ug/L	1	SW8270C	06/10/13 18:03	PL	117-81-7	1
Fluoranthene	42	ug/L	1	SW8270C	06/10/13 18:03	PL	206-44-0	1
Fluorene	43	ug/L	1	SW8270C	06/10/13 18:03	PL	86-73-7	1
Hexachlorobutadiene	35	ug/L	1	SW8270C	06/10/13 18:03	PL	87-68-3	1
Hexachlorocyclopentadiene	38	ug/L	1	SW8270C	06/10/13 18:03	PL	77-47-4	1
Hexachloroethane	34	ug/L	1	SW8270C	06/10/13 18:03	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	33	ug/L	1	SW8270C	06/10/13 18:03	PL	193-39-5	1
Isophorone	46	ug/L	1	SW8270C	06/10/13 18:03	PL	78-59-1	1
2-Methylnaphthalene	53	ug/L	1	SW8270C	06/10/13 18:03	PL	91-57-6	1
2-Methylphenol	33	ug/L	1	SW8270C	06/10/13 18:03	PL	95-48-7	1
3-, 4-Methylphenol	33	ug/L	1	SW8270C	06/10/13 18:03	PL	3/4-Cresol	1
2-Nitroaniline	36	ug/L	1	SW8270C	06/10/13 18:03	PL	88-74-4	1
2-Nitrophenol	31	ug/L	1	SW8270C	06/10/13 18:03	PL	88-75-5	1
3-Nitroaniline	15	ug/L	1	SW8270C	06/10/13 18:03	PL	99-09-2	1
4-Nitroaniline	27	ug/L	1	SW8270C	06/10/13 18:03	PL	100-01-6	1
4-Nitrophenol	23	ug/L	1	SW8270C	06/10/13 18:03	PL	100-02-7	1
N-Nitrosodi-n-propylamine	36	ug/L	1	SW8270C	06/10/13 18:03	PL	621-64-7	1
N-Nitrosodiphenylamine	35	ug/L	1	SW8270C	06/10/13 18:03	PL	86-30-6	1
Naphthalene	40	ug/L	1	SW8270C	06/10/13 18:03	PL	91-20-3	1
Nitrobenzene	34	ug/L	1	SW8270C	06/10/13 18:03	PL	98-95-3	1
di-n-Octyl phthalate	47	ug/L	1	SW8270C	06/10/13 18:03	PL	117-84-0	1
Pentachlorophenol	30	ug/L	1	SW8270C	06/10/13 18:03	PL	87-86-5	1
Phenanthrene	43	ug/L	1	SW8270C	06/10/13 18:03	PL	85-01-8	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S56706.05 (continued)
Sample Tag: MW-19 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenol	19	ug/L	1	SW8270C	06/10/13 18:03	PL	108-95-2	1
Pyrene	43	ug/L	1	SW8270C	06/10/13 18:03	PL	129-00-0	1
2,4,5-Trichlorophenol	35	ug/L	1	SW8270C	06/10/13 18:03	PL	95-95-4	1
2,4,6-Trichlorophenol	30	ug/L	1	SW8270C	06/10/13 18:03	PL	88-06-2	1
Hexachlorobenzene	40	ug/L	1	SW8270C	06/10/13 18:03	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	43	ug/L	5	SW8260B - SIM	06/07/13 19:46	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	76-13-1	2
Acetone	39	ug/L	10	SW8260B	06/11/13 22:37	WAT	67-64-1	2
Carbon disulfide	44	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-15-0	2
Methyl Acetate	44	ug/L	10	SW8260B	06/11/13 22:37	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	49	ug/L	1	SW8260B	06/11/13 22:37	WAT	1634-04-4	2
2-Butanone (MEK)	42	ug/L	10	SW8260B	06/11/13 22:37	WAT	78-93-3	2
Dichlorodifluoromethane	40	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-71-8	2
Chloromethane	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	74-87-3	2
Vinyl chloride	44	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-01-4	2
Bromomethane	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	74-83-9	2
Chloroethane	44	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-00-3	2
Trichlorofluoromethane	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-69-4	2
1,1-Dichloroethene	42	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-35-4	2
Methylene chloride	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-09-2	2
trans-1,2-Dichloroethene	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	156-60-5	2
1,1-Dichloroethane	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-34-3	2
cis-1,2-Dichloroethene	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	156-59-2	2
Chloroform	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	67-66-3	2
1,1,1-Trichloroethane	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	71-55-6	2
Cyclohexane	41	ug/L	1	SW8260B	06/11/13 22:37	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	51	ug/L	10	SW8260B	06/11/13 22:37	WAT	108-10-1	2
2-Hexanone	49	ug/L	10	SW8260B	06/11/13 22:37	WAT	591-78-6	2
Carbon tetrachloride	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	56-23-5	2
Benzene	44	ug/L	1	SW8260B	06/11/13 22:37	WAT	71-43-2	2
1,2-Dichloroethane	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	107-06-2	2
Trichloroethene	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	79-01-6	2
1,2-Dichloropropane	46	ug/L	1	SW8260B	06/11/13 22:37	WAT	78-87-5	2
Bromodichloromethane	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-27-4	2
Methyl cyclohexane	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	108-87-2	2
cis-1,3-Dichloropropene	44	ug/L	1	SW8260B	06/11/13 22:37	WAT	10061-01-5	2
Toluene	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	108-88-3	2
trans-1,3-Dichloropropene	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	10061-02-6	2
1,1,2-Trichloroethane	47	ug/L	1	SW8260B	06/11/13 22:37	WAT	79-00-5	2
Tetrachloroethene	44	ug/L	1	SW8260B	06/11/13 22:37	WAT	127-18-4	2
Dibromochloromethane	43	ug/L	1	SW8260B	06/11/13 22:37	WAT	124-48-1	2
Chlorobenzene	45	ug/L	1	SW8260B	06/11/13 22:37	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	48	ug/L	1	SW8260B	06/11/13 22:37	WAT	79-34-5	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56706.05 (continued)
Sample Tag: MW-19 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	46	ug/L	1	SW8260B	06/11/13 22:37	WAT	100-41-4	1
p,m-Xylene	95	ug/L	2	SW8260B	06/11/13 22:37	WAT		1
o-Xylene	48	ug/L	1	SW8260B	06/11/13 22:37	WAT	95-47-6	1
Styrene	49	ug/L	1	SW8260B	06/11/13 22:37	WAT	100-42-5	1
Isopropylbenzene	47	ug/L	1	SW8260B	06/11/13 22:37	WAT	98-82-8	1
Bromoform	46	ug/L	1	SW8260B	06/11/13 22:37	WAT	75-25-2	1
1,3-Dichlorobenzene	48	ug/L	1	SW8260B	06/11/13 22:37	WAT	541-73-1	1
1,4-Dichlorobenzene	46	ug/L	1	SW8260B	06/11/13 22:37	WAT	106-46-7	1
1,2-Dichlorobenzene	47	ug/L	1	SW8260B	06/11/13 22:37	WAT	95-50-1	1
1,2,4-Trichlorobenzene	50	ug/L	1	SW8260B	06/11/13 22:37	WAT	120-82-1	1
1,2-Dibromoethane	49	ug/L	1	SW8260B	06/11/13 22:37	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	48	ug/L	1	SW8260B	06/11/13 22:37	WAT	96-12-8	1

1-Spiked at 50ug/l

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74278

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006445.02013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joseph Rumsey

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1,4-dioxane SIM 8260	Hexavalent Chromium	Special Instructions
54706.01	6/4/13	-	Trip Blank	L	2		X						X						
.02	6/4/13	1230	MW-15	GW	6	2	3	1					X	X		X	X		
.03/.04/.05	6/4/13	1621	MW-19	GW	22	9	9	3					X	X		X	X	X	MS/MSD * 24 hr hold on Hexavalent Chromium *

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Joseph Rumsey / ARCADIS (Sampler)	6/4/13	1755
RECEIVED BY: SIGNATURE/ORGANIZATION	/ PME	6/4/13	17:55
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/ PME	6/4/13	18:43
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage	6/4/13	18:43

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Mes	6-5-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust	5-5-13	1000

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56707.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56707.01-S56707.02
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 06/04/2013
Submitted Date/Time: 06/05/2013 10:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56707.01	MW-03-04	Groundwater	06/04/2013 13:12
S56707.02	Trip Blank	Liquid	06/04/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S56707.01
Sample Tag: MW-03-04
Collected Date/Time: 06/04/2013 13:12
Matrix: Groundwater
COC Reference: 74282

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/06/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 15:09	PER	7440-36-0	
Arsenic	0.017	mg/L	0.002	SW6020	06/17/13 15:09	PER	7440-38-2	
Barium	0.311	mg/L	0.010	SW6020	06/17/13 15:09	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	06/17/13 15:09	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 15:09	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 15:09	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 15:09	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 15:09	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 15:09	PER	7439-92-1	
Manganese	0.128	mg/L	0.010	SW6020	06/17/13 15:09	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/06/13 16:38	CCM	7439-97-6	
Nickel	0.017	mg/L	0.010	SW6020	06/17/13 15:09	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 15:09	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 15:09	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 15:09	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 15:09	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	91-58-7	

Lab Sample ID: S56707.01 (continued)
Sample Tag: MW-03-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 15:19	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 15:19	PL	118-74-1	

Lab Sample ID: S56707.01 (continued)
Sample Tag: MW-03-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	48	ug/L	5	SW8260B - SIM	06/07/13 16:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/11/13 17:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/11/13 17:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/11/13 17:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/11/13 17:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/11/13 17:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/11/13 17:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	120-82-1	

Lab Sample ID: S56707.01 (continued)
Sample Tag: MW-03-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/11/13 17:30	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56707.02
Sample Tag: Trip Blank
Collected Date/Time: 06/04/2013 08:00
Matrix: Liquid
COC Reference: 74282

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/12/13 10:43	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/11/13 16:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/11/13 16:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/11/13 16:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/11/13 16:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/11/13 16:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/11/13 16:28	WAT		

Lab Sample ID: S56707.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/11/13 16:28	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74282

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448 .2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stanek

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs TAL	SVOCs TAL	PCBs	Metals (w/Hg) RL	1-4 dioxane SIM					
56707.01	6-4-13	1312	MW-03-04	GW	6	2	3	1					X	X		X	X					
.02	6/4/13	0800	TRIP BLANK	L	1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] ☒ Sampler DATE 6/4/13 TIME 1748
RECEIVED BY: SIGNATURE/ORGANIZATION: Pm Storage DATE 6/4/13 TIME 1748

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] DATE 6-5-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Faust DATE 6-5-13 TIME 1000

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] DATE 6-5-13 TIME 855

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56721.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56721.01-S56721.03
Project: Lansing Plant Project# B0064480.2013.00603
Collected Date: 06/05/2013
Submitted Date/Time: 06/05/2013 14:30
Sampled by: Joseph Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56721.01	Trip Blank	Liquid	06/05/2013 00:01
S56721.02	P3-SB-28	Groundwater	06/05/2013 10:21
S56721.03	EB-11	Liquid	06/05/2013 11:30

Analytical Laboratory Report

Lab Sample ID: S56721.01
Sample Tag: Trip Blank
Collected Date/Time: 06/05/2013 00:01
Matrix: Liquid
COC Reference: 74277

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/12/13 10:43	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/11/13 15:26	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/11/13 15:26	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/11/13 15:26	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/11/13 15:26	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/11/13 15:26	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/11/13 15:26	WAT		

Lab Sample ID: S56721.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/11/13 15:26	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56721.02
Sample Tag: P3-SB-28
Collected Date/Time: 06/05/2013 10:21
Matrix: Groundwater
COC Reference: 74277

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR
1	250ml Plastic	None	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	06/05/13 15:00	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 15:11	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 15:11	PER	7440-38-2	
Barium	0.025	mg/L	0.010	SW6020	06/17/13 15:11	PER	7440-39-3	
Boron	0.14	mg/L	0.04	SW6020	06/17/13 15:11	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 15:11	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 15:11	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 15:11	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	06/17/13 15:11	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 15:11	PER	7439-92-1	
Manganese	0.102	mg/L	0.010	SW6020	06/17/13 15:11	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/07/13 15:37	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 15:11	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 15:11	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 15:11	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 15:11	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 15:11	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/12/13 15:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	205-99-2	

Lab Sample ID: S56721.02 (continued)
Sample Tag: P3-SB-28

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 15:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/12/13 15:53	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	129-00-0	

Lab Sample ID: S56721.02 (continued)
Sample Tag: P3-SB-28

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 15:53	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 16:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/11/13 18:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/11/13 18:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/11/13 18:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/11/13 18:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/11/13 18:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/11/13 18:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	100-42-5	

Lab Sample ID: S56721.02 (continued)
Sample Tag: P3-SB-28

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/11/13 18:11	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56721.03
Sample Tag: EB-11
Collected Date/Time: 06/05/2013 11:30
Matrix: Liquid
COC Reference: 74277

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/12/13 10:43	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 15:13	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 15:13	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/17/13 15:13	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/17/13 15:13	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 15:13	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 15:13	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 15:13	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 15:13	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 15:13	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/17/13 15:13	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/07/13 15:39	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 15:13	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 15:13	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 15:13	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 15:13	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 15:13	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	91-58-7	

Lab Sample ID: S56721.03 (continued)
Sample Tag: EB-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 16:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 16:27	PL	118-74-1	

Lab Sample ID: S56721.03 (continued)
Sample Tag: EB-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/11/13 15:47	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/11/13 15:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/11/13 15:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/11/13 15:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/11/13 15:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/11/13 15:47	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/11/13 15:47	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74277

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B0064490.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joseph Rumschlag

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (wHg)	1,4-Dioxane 8260 SIM	Hexavalent Chromium	Special Instructions
567201	6/5/13	-	Trip Blank	L	2		2						X						
.02	6/5/13	1021	P3-SB-28	GW	7	2	3	1					X	X		X	X	X	*24 hr hold on Hex chrom*
.03	6/5/13	1130	EB-11	L	6	2	3	1					X	X		X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Joseph Rumschlag / ARCADIS	☒ Sampler	DATE 6/5/13	TIME 1225
RECEIVED BY: SIGNATURE/ORGANIZATION	/ ARCADIS		DATE 06/05/13	TIME 1225
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/ ARCADIS		DATE 06/05/13	TIME 14:37
RECEIVED BY: SIGNATURE/ORGANIZATION	Mod		DATE 6-5-13	TIME 1425

RELINQUISHED BY: SIGNATURE/ORGANIZATION	/ MSU	DATE 6-5-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Foote	DATE 6/5/13	TIME 1438

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 5.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56677.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56677.01-S56677.04
Project: Lansing Plant Project# B0064480.2013.00603
Collected Date: 06/03/2013
Submitted Date/Time: 06/04/2013 08:50
Sampled by: Joseph Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56677.01	Trip Blank	Liquid	06/03/2013 00:01
S56677.02	MW-91-3	Groundwater	06/03/2013 11:23
S56677.03	Dup-05	Groundwater	06/03/2013 00:01
S56677.04	FB-02	Liquid	06/03/2013 16:35

Analytical Laboratory Report

Lab Sample ID: S56677.01
Sample Tag: Trip Blank
Collected Date/Time: 06/03/2013 00:01
Matrix: Liquid
COC Reference: 74279

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 17:47	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 17:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 17:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 17:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 17:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 17:47	WAT		

Lab Sample ID: S56677.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 17:47	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56677.02
Sample Tag: MW-91-3
Collected Date/Time: 06/03/2013 11:23
Matrix: Groundwater
COC Reference: 74279

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
1	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/04/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 13:40	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 13:40	PER	7440-38-2	
Barium	0.024	mg/L	0.010	SW6020	06/17/13 13:40	PER	7440-39-3	
Boron	0.21	mg/L	0.04	SW6020	06/17/13 13:40	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 13:40	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 13:40	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 13:40	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 13:40	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 13:40	PER	7439-92-1	
Manganese	0.016	mg/L	0.010	SW6020	06/17/13 13:40	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/04/13 15:06	CCM	7439-97-6	
Nickel	0.011	mg/L	0.010	SW6020	06/17/13 13:40	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 13:40	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 13:40	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 13:40	PER	7440-62-2	
Zinc	0.034	mg/L	0.010	SW6020	06/17/13 13:40	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	91-58-7	

Lab Sample ID: S56677.02 (continued)
Sample Tag: MW-91-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 21:22	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	06/10/13 21:22	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 21:22	PL	118-74-1	

Lab Sample ID: S56677.02 (continued)
Sample Tag: MW-91-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 17:19	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 19:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 19:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 19:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 19:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 19:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 19:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	120-82-1	

Lab Sample ID: S56677.02 (continued)
Sample Tag: MW-91-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 19:48	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56677.03
Sample Tag: Dup-05
Collected Date/Time: 06/03/2013 00:01
Matrix: Groundwater
COC Reference: 74279

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
1	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/04/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 13:42	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 13:42	PER	7440-38-2	
Barium	0.023	mg/L	0.010	SW6020	06/17/13 13:42	PER	7440-39-3	
Boron	0.22	mg/L	0.04	SW6020	06/17/13 13:42	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 13:42	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 13:42	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 13:42	PER	7440-48-4	
Copper	0.006	mg/L	0.002	SW6020	06/17/13 13:42	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 13:42	PER	7439-92-1	
Manganese	0.015	mg/L	0.010	SW6020	06/17/13 13:42	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/04/13 15:08	CCM	7439-97-6	
Nickel	0.010	mg/L	0.010	SW6020	06/17/13 13:42	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 13:42	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 13:42	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 13:42	PER	7440-62-2	
Zinc	0.038	mg/L	0.010	SW6020	06/17/13 13:42	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	91-58-7	

Lab Sample ID: S56677.03 (continued)
Sample Tag: Dup-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 21:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 21:56	PL	118-74-1	

Lab Sample ID: S56677.03 (continued)
Sample Tag: Dup-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 17:41	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/06/13 20:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 20:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 20:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 20:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 20:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 20:08	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	120-82-1	

Lab Sample ID: S56677.03 (continued)
Sample Tag: Dup-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 20:08	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56677.04
Sample Tag: FB-02
Collected Date/Time: 06/03/2013 16:35
Matrix: Liquid
COC Reference: 74279

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
pH check for VOCs	<2	STD Units		N/A	06/05/13 10:52	WAT		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 22:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/10/13 22:30	PL	117-81-7	

Lab Sample ID: S56677.04 (continued)
Sample Tag: FB-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 22:30	PL	118-74-1	
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	76-13-1	
Acetone	10	ug/L	10	SW8260B	06/06/13 20:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/06/13 20:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/06/13 20:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	71-55-6	

Lab Sample ID: S56677.04 (continued)
Sample Tag: FB-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/06/13 20:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/06/13 20:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/06/13 20:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/06/13 20:28	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74279

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO: Task#00603

INVOICE TO

CONTACT NAME: | ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006449.0.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joseph Cunningham

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1,4-Dioxane 8260 SIM
56677.01	6/3/13	–	Trip Blank	L	2		2						X				
.02	6/3/13	1123	MW-91-3	GW	6	2	3	1					X	X		X	X
.03	6/3/13	–	DUP-05	GW	6	2	3	1					X	X		X	X
.04	6/3/13	1635	FB-02	L	5	2	3						X	X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Joseph Cunningham / ARCADIS	DATE / TIME	6/3/13 17:30
RECEIVED BY: SIGNATURE/ORGANIZATION	PME	DATE / TIME	6/3/13 17:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME	DATE / TIME	6/3/13 18:10
RECEIVED BY: SIGNATURE/ORGANIZATION	PM storage	DATE / TIME	6/3/13 18:10

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE / TIME	6/4/13 8:50
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust	DATE / TIME	6/4/13 8:50

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56726.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56726.01-S56726.06
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 06/05/2013
Submitted Date/Time: 06/06/2013 09:15
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56726.01	P6-SB-35	Groundwater	06/05/2013 10:48
S56726.02	Trip Blank	Liquid	06/05/2013 08:11
S56726.03	Dup #6	Groundwater	06/05/2013 00:01
S56726.04	P6-MW-01	Groundwater	06/05/2013 14:46
S56726.05	MW-12-14	Groundwater	06/05/2013 12:41
S56726.06	P6-SB-07	Groundwater	06/05/2013 14:13

Analytical Laboratory Report

Lab Sample ID: S56726.01
Sample Tag: P6-SB-35
Collected Date/Time: 06/05/2013 10:48
Matrix: Groundwater
COC Reference: 74281

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:18	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020	06/17/13 18:18	PER	7440-38-2	
Barium	0.017	mg/L	0.010	SW6020	06/17/13 18:18	PER	7440-39-3	
Boron	0.14	mg/L	0.04	SW6020	06/17/13 18:18	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:18	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 18:18	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:18	PER	7440-48-4	
Copper	0.006	mg/L	0.002	SW6020	06/17/13 18:18	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 18:18	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/17/13 18:18	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/07/13 15:55	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 18:18	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020	06/17/13 18:18	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:18	PER	7440-22-4	
Vanadium	0.020	mg/L	0.002	SW6020	06/17/13 18:18	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 18:18	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/12/13 18:08	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	91-58-7	

Lab Sample ID: S56726.01 (continued)
Sample Tag: P6-SB-35

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 18:08	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/12/13 18:08	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 18:08	PL	118-74-1	

Lab Sample ID: S56726.01 (continued)
Sample Tag: P6-SB-35

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 17:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 16:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 16:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 16:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 16:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 16:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 16:01	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	120-82-1	

Lab Sample ID: S56726.01 (continued)
Sample Tag: P6-SB-35

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 16:01	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56726.02
Sample Tag: Trip Blank
Collected Date/Time: 06/05/2013 08:11
Matrix: Liquid
COC Reference: 74281

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/12/13 21:25	LBR		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 16:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 16:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 16:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 16:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 16:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 16:22	WAT		

Lab Sample ID: S56726.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 16:22	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56726.03
Sample Tag: Dup #6
Collected Date/Time: 06/05/2013 00:01
Matrix: Groundwater
COC Reference: 74281

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:20	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020	06/17/13 18:20	PER	7440-38-2	
Barium	0.014	mg/L	0.010	SW6020	06/17/13 18:20	PER	7440-39-3	
Boron	0.14	mg/L	0.04	SW6020	06/17/13 18:20	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:20	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 18:20	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:20	PER	7440-48-4	
Copper	0.005	mg/L	0.002	SW6020	06/17/13 18:20	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 18:20	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/17/13 18:20	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/07/13 15:57	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 18:20	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 18:20	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:20	PER	7440-22-4	
Vanadium	0.018	mg/L	0.002	SW6020	06/17/13 18:20	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 18:20	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/12/13 18:42	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	91-58-7	

Lab Sample ID: S56726.03 (continued)
Sample Tag: Dup #6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	120-83-2	
2,4-Dimethylphenol	1	ug/L	1	SW8270C	06/12/13 18:42	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 18:42	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/12/13 18:42	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 18:42	PL	118-74-1	

Lab Sample ID: S56726.03 (continued)
Sample Tag: Dup #6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 17:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 16:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 16:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 16:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 16:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 16:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 16:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	120-82-1	

Lab Sample ID: S56726.03 (continued)
Sample Tag: Dup #6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 16:42	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56726.04
Sample Tag: P6-MW-01
Collected Date/Time: 06/05/2013 14:46
Matrix: Groundwater
COC Reference: 74281

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
BNA Extraction (Replicate 01)	Completed			3510C	06/13/13 23:28	EMR		F
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:21	PER	7440-36-0	
Arsenic	0.017	mg/L	0.002	SW6020	06/17/13 18:21	PER	7440-38-2	
Barium	0.083	mg/L	0.010	SW6020	06/17/13 18:21	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	06/17/13 18:21	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:21	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 18:21	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:21	PER	7440-48-4	
Copper	0.039	mg/L	0.002	SW6020	06/17/13 18:21	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 18:21	PER	7439-92-1	
Manganese	0.762	mg/L	0.010	SW6020	06/17/13 18:21	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/07/13 15:59	CCM	7439-97-6	
Nickel	0.050	mg/L	0.010	SW6020	06/17/13 18:21	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 18:21	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:21	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 18:21	PER	7440-62-2	
Zinc	0.011	mg/L	0.010	SW6020	06/17/13 18:21	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	98-86-2	S
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	120-12-7	S
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	1912-24-9	S
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	101-55-3	S
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	84-74-2	S
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	100-52-7	S
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	56-55-3	S
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	50-32-8	S
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	205-99-2	S
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	191-24-2	S

F-Analysis run outside of holding time
S-Surrogate recovery outside of control limits

Lab Sample ID: S56726.04 (continued)
Sample Tag: P6-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	207-08-9	S
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	85-68-7	S
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	95-57-8	S
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	59-50-7	S
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	106-47-8	S
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	7005-72-3	S
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	105-60-2	S
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	86-74-8	S
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	111-91-1	S
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	111-44-4	S
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	108-60-1	S
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	218-01-9	S
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	120-83-2	S
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	105-67-9	S
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	534-52-1	S
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 19:15	PL	53-70-3	S
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/12/13 19:15	PL	117-81-7	S
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	206-44-0	S
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	87-68-3	S
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	77-47-4	S
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	67-72-1	S
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	193-39-5	S
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	78-59-1	S
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	91-57-6	S
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	95-48-7	S
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	3/4-Cresol	S
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	88-75-5	S
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	100-01-6	S
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	621-64-7	S
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	86-30-6	S
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	91-20-3	S
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	98-95-3	S
di-n-Octyl phthalate	2	ug/L	1	SW8270C	06/12/13 19:15	PL	117-84-0	S
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	87-86-5	S
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	85-01-8	S
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	108-95-2	S
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	129-00-0	S

S-Surrogate recovery outside of control limits

Lab Sample ID: S56726.04 (continued)
Sample Tag: P6-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 19:15	PL	118-74-1	S
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	83-32-9	G
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	208-96-8	G
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	98-86-2	G
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	120-12-7	G
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	1912-24-9	G
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	92-52-4	G
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	101-55-3	G
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/17/13 16:27	PL	84-74-2	BG
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	100-52-7	G
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	56-55-3	G
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	50-32-8	G
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	205-99-2	G
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	191-24-2	G
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	207-08-9	G
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	85-68-7	G
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	91-58-7	G
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	95-57-8	G
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	59-50-7	G
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	106-47-8	G
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	7005-72-3	G
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	105-60-2	G
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	86-74-8	G
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	111-91-1	G
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	111-44-4	G
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	108-60-1	G
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	218-01-9	G
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	120-83-2	G
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	105-67-9	G
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	51-28-5	G
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	121-14-2	G
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	606-20-2	G
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	534-52-1	G
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 16:27	PL	53-70-3	G
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	132-64-9	G
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	84-66-2	G
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	131-11-3	G
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/17/13 16:27	PL	117-81-7	G
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	206-44-0	G
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	86-73-7	G
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	87-68-3	G
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	77-47-4	G

S-Surrogate recovery outside of control limits
G-Estimated result due to extraction run outside of holding time
B-Compound also found in associated method blank

Lab Sample ID: S56726.04 (continued)
Sample Tag: P6-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	67-72-1	G
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	193-39-5	G
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	78-59-1	G
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	91-57-6	G
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	95-48-7	G
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	3/4-Cresol	G
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	88-74-4	G
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	88-75-5	G
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	99-09-2	G
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	100-01-6	G
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	100-02-7	G
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	621-64-7	G
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	86-30-6	G
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	91-20-3	G
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	98-95-3	G
di-n-Octyl phthalate	1	ug/L	1	SW8270C	06/17/13 16:27	PL	117-84-0	G
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	87-86-5	G
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	85-01-8	G
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	108-95-2	G
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	129-00-0	G
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	95-95-4	G
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	88-06-2	G
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 16:27	PL	118-74-1	G
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 18:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 17:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 17:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 17:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	110-82-7	

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S56726.04 (continued)
Sample Tag: P6-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 17:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 17:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 17:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 17:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56726.05
Sample Tag: MW-12-14
Collected Date/Time: 06/05/2013 12:41
Matrix: Groundwater
COC Reference: 74281

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:23	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 18:23	PER	7440-38-2	
Barium	0.120	mg/L	0.010	SW6020	06/17/13 18:23	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	06/17/13 18:23	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:23	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 18:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:23	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	06/17/13 18:23	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 18:23	PER	7439-92-1	
Manganese	0.394	mg/L	0.010	SW6020	06/17/13 18:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/07/13 16:01	CCM	7439-97-6	
Nickel	0.019	mg/L	0.010	SW6020	06/17/13 18:23	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 18:23	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:23	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 18:23	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 18:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	91-58-7	

Lab Sample ID: S56726.05 (continued)
Sample Tag: MW-12-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 19:49	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 19:49	PL	118-74-1	

Lab Sample ID: S56726.05 (continued)
Sample Tag: MW-12-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 18:40	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 17:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 17:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 17:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 17:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 17:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 17:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	120-82-1	

Lab Sample ID: S56726.05 (continued)
Sample Tag: MW-12-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 17:23	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56726.06
Sample Tag: P6-SB-07
Collected Date/Time: 06/05/2013 14:13
Matrix: Groundwater
COC Reference: 74281

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:20	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:25	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 18:25	PER	7440-38-2	
Barium	0.040	mg/L	0.010	SW6020	06/17/13 18:25	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020	06/17/13 18:25	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:25	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 18:25	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:25	PER	7440-48-4	
Copper	0.015	mg/L	0.002	SW6020	06/17/13 18:25	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 18:25	PER	7439-92-1	
Manganese	0.062	mg/L	0.010	SW6020	06/17/13 18:25	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/07/13 16:30	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 18:25	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 18:25	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:25	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 18:25	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 18:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	91-58-7	

Lab Sample ID: S56726.06 (continued)
Sample Tag: P6-SB-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 20:22	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 20:22	PL	118-74-1	

Lab Sample ID: S56726.06 (continued)
Sample Tag: P6-SB-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 19:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 17:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 17:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 17:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 17:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 17:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 17:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	120-82-1	

Lab Sample ID: S56726.06 (continued)
Sample Tag: P6-SB-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 17:44	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74281

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448 1.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1-4dioxane (SIMS)	Special Instructions
567226.01	6/5/13	1048	PG-SB-35	GW	6	2	3	1					X	X		X	X	
.02	6/5/13	0811	TRIP BLANK	L	1		1	✱					X					
.03	6/5/13	—	DUP #6	GW	6	2	3	1					X	X		X	X	
.04	6/5/13	1446	PG-MW-01	GW	6	2	3	1					X	X		X	X	
.05	6/5/13	1241	MW-12-14	GW	6	2	3	1					X	X		X	X	
.06	6/5/13	1413	PG-SB-07	GW	6	2	3	1					X	X		X	X	← ✱ Sample collected by J.R.

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☒ Sampler DATE 6/5/13 TIME 1845
RECEIVED BY: SIGNATURE/ORGANIZATION Pm Storage DATE 6/5/13 TIME 1845
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 6-6-13 TIME 8—

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE 6.6.13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Talbutter Faust DATE 6/6/13 TIME 915

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56779.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56779.01-S56779.02
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 06/06/2013
Submitted Date/Time: 06/07/2013 10:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56779.01	P6-SB-21	Groundwater	06/06/2013 11:20
S56779.02	Trip Blank	Liquid	06/06/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S56779.01
Sample Tag: P6-SB-21
Collected Date/Time: 06/06/2013 11:20
Matrix: Groundwater
COC Reference: 74280

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/13/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:27	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020	06/17/13 18:27	PER	7440-38-2	
Barium	0.029	mg/L	0.010	SW6020	06/17/13 18:27	PER	7440-39-3	
Boron	0.32	mg/L	0.04	SW6020	06/17/13 18:27	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:27	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 18:27	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:27	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	06/17/13 18:27	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 18:27	PER	7439-92-1	
Manganese	0.272	mg/L	0.010	SW6020	06/17/13 18:27	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 14:54	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 18:27	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 18:27	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:27	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 18:27	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 18:27	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/17/13 16:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	91-58-7	

Lab Sample ID: S56779.01 (continued)
Sample Tag: P6-SB-21

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 16:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 16:56	PL	118-74-1	

Lab Sample ID: S56779.01 (continued)
Sample Tag: P6-SB-21

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/10/13 15:11	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/13/13 04:54	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/13/13 04:54	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/13/13 04:54	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/13/13 04:54	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/13/13 04:54	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/13/13 04:54	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	120-82-1	

Lab Sample ID: S56779.01 (continued)
Sample Tag: P6-SB-21

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/13/13 04:54	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56779.02
Sample Tag: Trip Blank
Collected Date/Time: 06/06/2013 08:00
Matrix: Liquid
COC Reference: 74280

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/13/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/13/13 05:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/13/13 05:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/13/13 05:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/13/13 05:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/13/13 05:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/13/13 05:14	WAT		

Lab Sample ID: S56779.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/13/13 05:14	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74280

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task#00603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448.01.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE (YEAR 2013)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1-4 dioxane SIM
56779.01	6/6	1120	PG-SB-21	GW	6	2	3	1					X	X		X	X
.02	6/6	0800	TRIP BLK	L	1		1						X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION — X Sampler — DATE 6/6/13 — TIME 1825
RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 6/6/13 — TIME 1825

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE — TIME
RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 6-7-13 — TIME 10

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE 6-7-13 — TIME
RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 6-7-13 — TIME 1000

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS
SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56780.01(01)
Generated on 06/18/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56780.01-S56780.03
Project: Lansing Plant 6 Project# B0064481.2013.00603
Collected Date: 06/06/2013
Submitted Date/Time: 06/07/2013 10:00
Sampled by: Alex Villhauer
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56780.01	Trip Blank	Groundwater	06/06/2013 08:40
S56780.02	MWBP-13A-UST-1-4	Groundwater	06/06/2013 10:25
S56780.03	EQ-12	Groundwater	06/06/2013 10:49

Analytical Laboratory Report

Lab Sample ID: S56780.01
Sample Tag: Trip Blank
Collected Date/Time: 06/06/2013 08:40
Matrix: Groundwater
COC Reference: 74273

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/13/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/13/13 05:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/13/13 05:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/13/13 05:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/13/13 05:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/13/13 05:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/13/13 05:35	WAT		

Lab Sample ID: S56780.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/13/13 05:35	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56780.02
Sample Tag: MWBP-13A-UST-1-4
Collected Date/Time: 06/06/2013 10:25
Matrix: Groundwater
COC Reference: 74273

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/13/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 19:00	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	06/17/13 19:00	PER	7440-38-2	
Barium	0.175	mg/L	0.010	SW6020	06/17/13 19:00	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/17/13 19:00	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 19:00	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 19:00	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 19:00	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 19:00	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 19:00	PER	7439-92-1	
Manganese	0.496	mg/L	0.010	SW6020	06/17/13 19:00	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 14:56	CCM	7439-97-6	
Nickel	0.022	mg/L	0.010	SW6020	06/17/13 19:00	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020	06/17/13 19:00	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 19:00	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 19:00	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 19:00	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	91-58-7	

Lab Sample ID: S56780.02 (continued)
Sample Tag: MWBP-13A-UST-1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 17:26	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 17:26	PL	118-74-1	

Lab Sample ID: S56780.02 (continued)
Sample Tag: MWBP-13A-UST-1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/10/13 15:33	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/13/13 06:36	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/13/13 06:36	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/13/13 06:36	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/13/13 06:36	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/13/13 06:36	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/13/13 06:36	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	120-82-1	

Lab Sample ID: S56780.02 (continued)
Sample Tag: MWBP-13A-UST-1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/13/13 06:36	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56780.03
Sample Tag: EQ-12
Collected Date/Time: 06/06/2013 10:49
Matrix: Groundwater
COC Reference: 74273

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/13/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:48	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 18:48	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/17/13 18:48	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/17/13 18:48	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:48	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 18:48	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:48	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 18:48	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 18:48	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/17/13 18:48	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 14:58	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 18:48	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 18:48	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:48	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 18:48	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 18:48	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	91-58-7	

Lab Sample ID: S56780.03 (continued)
Sample Tag: EQ-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 17:55	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 17:55	PL	118-74-1	

Lab Sample ID: S56780.03 (continued)
Sample Tag: EQ-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/10/13 15:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/13/13 05:55	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/13/13 05:55	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/13/13 05:55	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/13/13 05:55	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/13/13 05:55	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/13/13 05:55	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	120-82-1	

Lab Sample ID: S56780.03 (continued)
Sample Tag: EQ-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/13/13 05:55	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74273

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task#00603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448.2013.00603

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villaneuva

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1,4 dioxane (SIM)
56780.01	6/6	8:40	Trip blank	GW	2		2						X				
.02	6/6	10:25	MWBP-13A-VST-1-4	GW	6	2	3	1					X	X		X	X
.03	6/6	10:99	EQ-12										X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] / PME ☒ Sampler DATE 6/6/13 TIME 19:00

RECEIVED BY: SIGNATURE/ORGANIZATION: PM Storage DATE 6/6/13 TIME 19:00

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE TIME

RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] [signature] DATE 6-7-13 TIME 1000

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] DATE 6-7-13 TIME

RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE 6-7-13 TIME 1000

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 6.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56668.01(01)
Generated on 06/19/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56668.01-S56668.05
Project: Lansing Plant 3 Project# B0064480.2013.00603
Collected Date: 05/30/2013 - 05/31/2013
Submitted Date/Time: 05/31/2013 15:45
Sampled by: Joseph Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56668.01	Trip Blank	Liquid	05/30/2013 00:01
S56668.02	UNK-09	Groundwater	05/30/2013 18:18
S56668.03	UNK-10	Groundwater	05/31/2013 10:58
S56668.04	MW-23	Groundwater	05/31/2013 13:47
S56668.05	MW-12-20	Groundwater	05/31/2013 14:44

Analytical Laboratory Report

Lab Sample ID: S56668.01
Sample Tag: Trip Blank
Collected Date/Time: 05/30/2013 00:01
Matrix: Liquid
COC Reference: 74253

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/04/13 10:44	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/03/13 18:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/03/13 18:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/03/13 18:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/03/13 18:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/03/13 18:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/03/13 18:04	WAT		

Lab Sample ID: S56668.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/03/13 18:04	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56668.02
Sample Tag: UNK-09
Collected Date/Time: 05/30/2013 18:18
Matrix: Groundwater
COC Reference: 74253

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/04/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/14/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/04/13 10:44	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/14/13 14:45	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020	06/14/13 14:45	PER	7440-38-2	
Barium	0.038	mg/L	0.010	SW6020	06/14/13 14:45	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/14/13 14:45	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/14/13 14:45	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/14/13 14:45	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/14/13 14:45	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	06/14/13 14:45	PER	7440-50-8	
Lead	0.002	mg/L	0.002	SW6020	06/14/13 14:45	PER	7439-92-1	
Manganese	0.035	mg/L	0.010	SW6020	06/14/13 14:45	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/04/13 14:56	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/14/13 14:45	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/14/13 14:45	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/14/13 14:45	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/14/13 14:45	PER	7440-62-2	
Zinc	0.023	mg/L	0.010	SW6020	06/14/13 14:45	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	91-58-7	

Lab Sample ID: S56668.02 (continued)
Sample Tag: UNK-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 19:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/10/13 19:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 19:09	PL	118-74-1	

Lab Sample ID: S56668.02 (continued)
Sample Tag: UNK-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 16:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/03/13 18:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/03/13 18:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/03/13 18:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/03/13 18:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/03/13 18:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/03/13 18:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	120-82-1	

Lab Sample ID: S56668.02 (continued)
Sample Tag: UNK-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/03/13 18:24	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56668.03
Sample Tag: UNK-10
Collected Date/Time: 05/31/2013 10:58
Matrix: Groundwater
COC Reference: 74253

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/04/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/04/13 10:44	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 13:17	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	06/17/13 13:17	PER	7440-38-2	
Barium	0.042	mg/L	0.010	SW6020	06/17/13 13:17	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020	06/17/13 13:17	PER	7440-42-8	
Cadmium	0.0018	mg/L	0.0010	SW6020	06/17/13 13:17	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 13:17	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 13:17	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	06/17/13 13:17	PER	7440-50-8	
Lead	0.002	mg/L	0.002	SW6020	06/17/13 13:17	PER	7439-92-1	
Manganese	0.451	mg/L	0.010	SW6020	06/17/13 13:17	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/04/13 14:58	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 13:17	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 13:17	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 13:17	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 13:17	PER	7440-62-2	
Zinc	0.114	mg/L	0.010	SW6020	06/17/13 13:17	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	91-58-7	

Lab Sample ID: S56668.03 (continued)
Sample Tag: UNK-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 19:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 19:43	PL	118-74-1	

Lab Sample ID: S56668.03 (continued)
Sample Tag: UNK-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 16:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/03/13 18:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/03/13 18:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/03/13 18:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/03/13 18:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/03/13 18:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/03/13 18:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	120-82-1	

Lab Sample ID: S56668.03 (continued)
Sample Tag: UNK-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/03/13 18:44	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56668.04
Sample Tag: MW-23
Collected Date/Time: 05/31/2013 13:47
Matrix: Groundwater
COC Reference: 74253

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/04/13 23:49	EMR		
Mercury Digestion	Completed			SW7471A	06/04/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/04/13 10:47	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 13:21	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020	06/17/13 13:21	PER	7440-38-2	
Barium	0.080	mg/L	0.010	SW6020	06/17/13 13:21	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/17/13 13:21	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 13:21	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 13:21	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 13:21	PER	7440-48-4	
Copper	0.009	mg/L	0.002	SW6020	06/17/13 13:21	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 13:21	PER	7439-92-1	
Manganese	0.054	mg/L	0.010	SW6020	06/17/13 13:21	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/04/13 15:00	CCM	7439-97-6	
Nickel	0.010	mg/L	0.010	SW6020	06/17/13 13:21	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 13:21	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 13:21	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 13:21	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 13:21	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	91-58-7	

Lab Sample ID: S56668.04 (continued)
Sample Tag: MW-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/10/13 20:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/10/13 20:16	PL	118-74-1	

Lab Sample ID: S56668.04 (continued)
Sample Tag: MW-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/06/13 16:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/03/13 19:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/03/13 19:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/03/13 19:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/03/13 19:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/03/13 19:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/03/13 19:04	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	120-82-1	

Lab Sample ID: S56668.04 (continued)
Sample Tag: MW-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/03/13 19:04	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56668.05
Sample Tag: MW-12-20
Collected Date/Time: 05/31/2013 14:44
Matrix: Groundwater
COC Reference: 74253

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	06/04/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/17/13 09:00	PER		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 13:36	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 13:36	PER	7440-38-2	
Barium, Dissolved	0.128	mg/L	0.010	SW6020	06/17/13 13:36	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020	06/17/13 13:36	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/17/13 13:36	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 13:36	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 13:36	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 13:36	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 13:36	PER	7439-92-1	
Manganese, Dissolved	0.122	mg/L	0.010	SW6020	06/17/13 13:36	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/04/13 15:02	CCM	7439-97-6	
Nickel, Dissolved	0.012	mg/L	0.010	SW6020	06/17/13 13:36	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	06/17/13 13:36	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/17/13 13:36	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 13:36	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 13:36	PER	7440-66-6	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74253

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task# 006073

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant #2 Project#: B006445.02013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joseph Rumschlag

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (wHg)	1,4-Dioxane 8260 SIM	Dissolved metals (ex Hg)
56668.01	5/30/13	—	Trip Blank	L	2		2						X					
.02	5/30/13	1818	UNK-09	GW	6	2	3	1					X	X		X	X	
.03	5/31/13	1058	UNK-10	GW	6	2	3	1					X	X		X	X	
.04	5/31/13	1347	MW-23	GW	6	2	3	1					X	X		X	X	
.05	5/31/13	1444	MW-12-20	GW	1			1										X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Joseph Rumschlag / ARCADIS ☒ Sampler DATE: 5/31/13 TIME: 1505
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 5/31/13 TIME: 1525

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabetha Faust DATE: 5/31/13 TIME: 1545

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56724.01(01)
Generated on 06/19/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56724.01-S56724.02
Project: Lansing Plant Project# B0064479.2013
Collected Date: 06/05/2013
Submitted Date/Time: 06/06/2013 09:15
Sampled by: Robert Prigge
P.O. #: B0064479.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56724.01	P2-MW-03	Groundwater	06/05/2013 15:50
S56724.02	Trip Blank	Water	06/05/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56724.01
Sample Tag: P2-MW-03
Collected Date/Time: 06/05/2013 15:50
Matrix: Groundwater
COC Reference: 74274

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
2	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	06/07/13 12:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 18:10	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:07	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020	06/17/13 18:10	PER	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020	06/17/13 18:07	PER	7440-38-2	
Barium, Dissolved	0.402	mg/L	0.010	SW6020	06/17/13 18:10	PER	7440-39-3	
Barium	0.422	mg/L	0.010	SW6020	06/17/13 18:07	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	06/17/13 18:10	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	06/17/13 18:07	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/17/13 18:10	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:07	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:10	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 18:07	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:10	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:07	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 18:10	PER	7440-50-8	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 18:07	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 18:10	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 18:07	PER	7439-92-1	
Manganese, Dissolved	0.157	mg/L	0.010	SW6020	06/17/13 18:10	PER	7439-96-5	
Manganese	0.171	mg/L	0.010	SW6020	06/17/13 18:07	PER	7439-96-5	
Mercury, Dissolved	0.0002	mg/L	0.0001	SW7471A	06/07/13 15:43	CCM	7439-97-6	
Mercury	0.0001	mg/L	0.0001	SW7471A	06/07/13 15:41	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:10	PER	7440-02-0	
Nickel	Not detected	mg/L	0.010	SW6020	06/17/13 18:07	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	06/17/13 18:10	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 18:07	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/17/13 18:10	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:07	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 18:10	PER	7440-62-2	
Vanadium	0.002	mg/L	0.002	SW6020	06/17/13 18:07	PER	7440-62-2	
Zinc, Dissolved	0.010	mg/L	0.010	SW6020	06/17/13 18:10	PER	7440-66-6	
Zinc	0.012	mg/L	0.010	SW6020	06/17/13 18:07	PER	7440-66-6	

Lab Sample ID: S56724.01 (continued)
Sample Tag: P2-MW-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/12/13 17:01	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 17:01	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	06/12/13 17:01	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/12/13 17:01	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	88-75-5	

Lab Sample ID: S56724.01 (continued)
Sample Tag: P2-MW-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 17:01	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	36	ug/L	5	SW8260B - SIM	06/07/13 16:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 13:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 13:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 13:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 13:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 13:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	108-87-2	

Lab Sample ID: S56724.01 (continued)
Sample Tag: P2-MW-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 13:46	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 13:46	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56724.02
Sample Tag: Trip Blank
Collected Date/Time: 06/05/2013 00:01
Matrix: Water
COC Reference: 74274

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/12/13 21:25	LBR		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 14:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 14:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 14:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 14:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 14:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 14:07	WAT		

Lab Sample ID: S56724.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 14:07	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74274

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006447 7.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Fisse

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg) Total	Dissolved Metals	1,4 dioxane 8260 SIM
567241.01	06/05/13	15:50	P2-MW-03	GW	7	X	X	X					3	2		1	1	3
.02	--	--	Trip blank	W	2		X						2					

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	ARCADIS ☐ Sampler	06/05/13	17:00
RECEIVED BY: SIGNATURE/ORGANIZATION	/PME	6/5/13	17:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	/PME	6/5/13	18:00
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage	6/5/13	18:00

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	MEI	6-6-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust	6/6/13	9:15

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 6°

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56725.01(01)
Generated on 06/19/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56725.01-S56725.02
Project: Lansing Plant 2 Project# B0064479.2013.00603
Collected Date: 06/05/2013
Submitted Date/Time: 06/06/2013 09:15
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56725.01	Trip Blank	Groundwater	06/05/2013 13:30
S56725.02	P2-SB-20	Groundwater	06/05/2013 16:35

Analytical Laboratory Report

Lab Sample ID: S56725.01
Sample Tag: Trip Blank
Collected Date/Time: 06/05/2013 13:30
Matrix: Groundwater
COC Reference: 74245

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/12/13 21:25	LBR		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 14:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 14:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 14:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 14:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 14:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 14:27	WAT		

Lab Sample ID: S56725.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 14:27	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56725.02
Sample Tag: P2-SB-20
Collected Date/Time: 06/05/2013 16:35
Matrix: Groundwater
COC Reference: 74245

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/06/13 22:07	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/07/13 14:00	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 18:16	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 18:12	PER	7440-36-0	
Arsenic, Dissolved	0.025	mg/L	0.002	SW6020	06/17/13 18:16	PER	7440-38-2	
Arsenic	0.025	mg/L	0.002	SW6020	06/17/13 18:12	PER	7440-38-2	
Barium, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:16	PER	7440-39-3	
Barium	0.070	mg/L	0.010	SW6020	06/17/13 18:12	PER	7440-39-3	
Boron, Dissolved	0.14	mg/L	0.04	SW6020	06/17/13 18:16	PER	7440-42-8	
Boron	0.15	mg/L	0.04	SW6020	06/17/13 18:12	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/17/13 18:16	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 18:12	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:16	PER	7440-47-3	
Chromium	0.011	mg/L	0.010	SW6020	06/17/13 18:12	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:16	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 18:12	PER	7440-48-4	
Copper, Dissolved	0.007	mg/L	0.002	SW6020	06/17/13 18:16	PER	7440-50-8	
Copper	0.029	mg/L	0.002	SW6020	06/17/13 18:12	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 18:16	PER	7439-92-1	
Lead	0.010	mg/L	0.002	SW6020	06/17/13 18:12	PER	7439-92-1	
Manganese, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:16	PER	7439-96-5	
Manganese	0.106	mg/L	0.010	SW6020	06/17/13 18:12	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:10	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 14:52	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:16	PER	7440-02-0	
Nickel	0.014	mg/L	0.010	SW6020	06/17/13 18:12	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	06/17/13 18:16	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 18:12	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/17/13 18:16	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 18:12	PER	7440-22-4	
Vanadium, Dissolved	0.013	mg/L	0.002	SW6020	06/17/13 18:16	PER	7440-62-2	
Vanadium	0.024	mg/L	0.002	SW6020	06/17/13 18:12	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 18:16	PER	7440-66-6	
Zinc	0.025	mg/L	0.010	SW6020	06/17/13 18:12	PER	7440-66-6	

Lab Sample ID: S56725.02 (continued)
Sample Tag: P2-SB-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	06/12/13 17:34	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/12/13 17:34	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/12/13 17:34	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	88-75-5	

Lab Sample ID: S56725.02 (continued)
Sample Tag: P2-SB-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/12/13 17:34	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/07/13 17:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/12/13 14:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/12/13 14:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/12/13 14:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/12/13 14:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/12/13 14:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	108-87-2	

Lab Sample ID: S56725.02 (continued)
Sample Tag: P2-SB-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/12/13 14:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/12/13 14:48	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74245

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 2 Project#: B006447 9.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villhauer

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs: TCL	SVOCs: TCL	PCBs	Metals (w/Hg): TAL	1,4 dioxane (SIM)	diss. TAL Metals
560725.01	6/5	13:30	Trip blank	GW	2		2						X					
.02	6/5	18:35	P2-SB-20	GW	6	2	3	1					X	X		X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	CE Vallhauer / PME ☒ Sampler	DATE 6/5/13	TIME 18:09
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage	DATE 6/5/13	TIME 18:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6-6-13	TIME 800

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Tabatha Faust / MEC	DATE 6-6-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust / MEC	DATE 6/6/13	TIME 915

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56800.01(01)
Generated on 06/19/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56800.01-S56800.05
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 06/07/2013
Submitted Date/Time: 06/07/2013 16:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56800.01	SME-MW-02	Groundwater	06/07/2013 09:00
S56800.02	MW-02-02 (6)	Groundwater	06/07/2013 10:39
S56800.03	MW-02-01 (6)	Groundwater	06/07/2013 13:52
S56800.04	Trip Blank	Liquid	06/07/2013 08:00
S56800.05	MWBP-12A-UST1-4	Groundwater	06/07/2013 14:50

Analytical Laboratory Report

Lab Sample ID: S56800.01
Sample Tag: SME-MW-02
Collected Date/Time: 06/07/2013 09:00
Matrix: Groundwater
COC Reference: 74270

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/10/13 14:30	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 19:14	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 19:08	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 19:14	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	06/17/13 19:08	PER	7440-38-2	
Barium, Dissolved	0.273	mg/L	0.010	SW6020	06/17/13 19:14	PER	7440-39-3	
Barium	0.273	mg/L	0.010	SW6020	06/17/13 19:08	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	06/17/13 19:14	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	06/17/13 19:08	PER	7440-42-8	
Cadmium, Dissolved	0.0010	mg/L	0.0010	SW6020	06/17/13 19:14	PER	7440-43-9	
Cadmium	0.0017	mg/L	0.0010	SW6020	06/17/13 19:08	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 19:14	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 19:08	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 19:14	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 19:08	PER	7440-48-4	
Copper, Dissolved	0.002	mg/L	0.002	SW6020	06/17/13 19:14	PER	7440-50-8	
Copper	0.003	mg/L	0.002	SW6020	06/17/13 19:08	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 19:14	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 19:08	PER	7439-92-1	
Manganese, Dissolved	0.013	mg/L	0.010	SW6020	06/17/13 19:14	PER	7439-96-5	
Manganese	0.017	mg/L	0.010	SW6020	06/17/13 19:08	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:22	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:20	CCM	7439-97-6	
Nickel, Dissolved	0.013	mg/L	0.010	SW6020	06/17/13 19:14	PER	7440-02-0	
Nickel	0.012	mg/L	0.010	SW6020	06/17/13 19:08	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	06/17/13 19:14	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 19:08	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/17/13 19:14	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 19:08	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 19:14	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 19:08	PER	7440-62-2	
Zinc, Dissolved	0.013	mg/L	0.010	SW6020	06/17/13 19:14	PER	7440-66-6	
Zinc	0.014	mg/L	0.010	SW6020	06/17/13 19:08	PER	7440-66-6	

Lab Sample ID: S56800.01 (continued)
Sample Tag: SME-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	7005-72-3	
Caprolactam	98	ug/L	1	SW8270C	06/17/13 19:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 19:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	88-75-5	

Lab Sample ID: S56800.01 (continued)
Sample Tag: SME-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 19:53	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/10/13 17:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/14/13 17:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/14/13 17:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/14/13 17:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/14/13 17:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/14/13 17:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	108-87-2	

Lab Sample ID: S56800.01 (continued)
Sample Tag: SME-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/14/13 17:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/14/13 17:22	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56800.02
Sample Tag: MW-02-02 (6)
Collected Date/Time: 06/07/2013 10:39
Matrix: Groundwater
COC Reference: 74270

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/10/13 14:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 19:16	PER	7440-36-0	
Arsenic	0.031	mg/L	0.002	SW6020	06/17/13 19:16	PER	7440-38-2	
Barium	1.04	mg/L	0.010	SW6020	06/17/13 19:16	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/17/13 19:16	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 19:16	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 19:16	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 19:16	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 19:16	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 19:16	PER	7439-92-1	
Manganese	0.120	mg/L	0.010	SW6020	06/17/13 19:16	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:24	CCM	7439-97-6	
Nickel	0.048	mg/L	0.010	SW6020	06/17/13 19:16	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020	06/17/13 19:16	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 19:16	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 19:16	PER	7440-62-2	
Zinc	0.025	mg/L	0.010	SW6020	06/17/13 19:16	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/17/13 20:22	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	91-58-7	

Lab Sample ID: S56800.02 (continued)
Sample Tag: MW-02-02 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 20:22	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/17/13 20:22	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 20:22	PL	118-74-1	

Lab Sample ID: S56800.02 (continued)
Sample Tag: MW-02-02 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	17	ug/L	5	SW8260B - SIM	06/10/13 17:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/14/13 17:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/14/13 17:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/14/13 17:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/14/13 17:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/14/13 17:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/14/13 17:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	120-82-1	

Lab Sample ID: S56800.02 (continued)
Sample Tag: MW-02-02 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/14/13 17:43	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56800.03
Sample Tag: MW-02-01 (6)
Collected Date/Time: 06/07/2013 13:52
Matrix: Groundwater
COC Reference: 74270

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/10/13 14:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 19:18	PER	7440-36-0	
Arsenic	0.031	mg/L	0.002	SW6020	06/17/13 19:18	PER	7440-38-2	
Barium	1.25	mg/L	0.010	SW6020	06/17/13 19:18	PER	7440-39-3	
Boron	0.15	mg/L	0.04	SW6020	06/17/13 19:18	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 19:18	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 19:18	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 19:18	PER	7440-48-4	
Copper	0.007	mg/L	0.002	SW6020	06/17/13 19:18	PER	7440-50-8	
Lead	0.002	mg/L	0.002	SW6020	06/17/13 19:18	PER	7439-92-1	
Manganese	0.194	mg/L	0.010	SW6020	06/17/13 19:18	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:26	CCM	7439-97-6	
Nickel	0.032	mg/L	0.010	SW6020	06/17/13 19:18	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 19:18	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 19:18	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 19:18	PER	7440-62-2	
Zinc	0.016	mg/L	0.010	SW6020	06/17/13 19:18	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	91-58-7	

Lab Sample ID: S56800.03 (continued)
Sample Tag: MW-02-01 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 22:49	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 22:49	PL	118-74-1	

Lab Sample ID: S56800.03 (continued)
Sample Tag: MW-02-01 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	21	ug/L	5	SW8260B - SIM	06/10/13 17:45	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/14/13 18:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/14/13 18:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/14/13 18:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/14/13 18:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/14/13 18:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/14/13 18:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	120-82-1	

Lab Sample ID: S56800.03 (continued)
Sample Tag: MW-02-01 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/14/13 18:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56800.04
Sample Tag: Trip Blank
Collected Date/Time: 06/07/2013 08:00
Matrix: Liquid
COC Reference: 74270

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:25	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/14/13 18:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/14/13 18:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/14/13 18:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/14/13 18:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/14/13 18:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/14/13 18:23	WAT		

Lab Sample ID: S56800.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/14/13 18:23	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56800.05
Sample Tag: MWBP-12A-UST1-4
Collected Date/Time: 06/07/2013 14:50
Matrix: Groundwater
COC Reference: 74270

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/10/13 15:02	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 19:21	PER	7440-36-0	
Arsenic	0.014	mg/L	0.002	SW6020	06/17/13 19:21	PER	7440-38-2	
Barium	0.516	mg/L	0.010	SW6020	06/17/13 19:21	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/17/13 19:21	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 19:21	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 19:21	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 19:21	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 19:21	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 19:21	PER	7439-92-1	
Manganese	0.444	mg/L	0.010	SW6020	06/17/13 19:21	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:28	CCM	7439-97-6	
Nickel	0.019	mg/L	0.010	SW6020	06/17/13 19:21	PER	7440-02-0	
Selenium	0.007	mg/L	0.005	SW6020	06/17/13 19:21	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 19:21	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 19:21	PER	7440-62-2	
Zinc	0.014	mg/L	0.010	SW6020	06/17/13 19:21	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	91-58-7	

Lab Sample ID: S56800.05 (continued)
Sample Tag: MWBP-12A-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 20:52	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 20:52	PL	118-74-1	

Lab Sample ID: S56800.05 (continued)
Sample Tag: MWBP-12A-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/10/13 18:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/14/13 18:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/14/13 18:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/14/13 18:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/14/13 18:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/14/13 18:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/14/13 18:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	120-82-1	

Lab Sample ID: S56800.05 (continued)
Sample Tag: MWBP-12A-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/14/13 18:44	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74270

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448 1.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Spelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

MERIT LAB NO. (FOR LAB USE ONLY)	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs 7L	SVOCs 1L	PCBs	Metals (w/Hg) 1mL	1-4 Dioxane (SIM)	Special Instructions
568600.01	6/7	0900	SME-MW-02	GW	3	2	3	2					X	X		X	X	
.02	6/7	1039	MW-02-02 (6)	GW	6	2	3	1					X	X		X	X	
.03	6/7	1352	MW-02-01 (6)	GW	6	2	3	1					X	X		X	X	
.04	6/7	0800	TRIP BLANK	L	1		1						X					
.05	6/7	1450	MWBP-12A-UST1-4	GW	6	2	3	1					X	X		X	X	⊗AV Sampled MWBP-12A-UST1-4

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] Sampler DATE: 6/7/13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] Tim Blaser DATE: 6/7/13 TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] MOL DATE: 6.7.13 TIME: 15:20
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] MOL DATE: 6-7-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 6/7/13 TIME: 1600

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56799.01(01)
Generated on 06/19/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56799.01-S56799.03
Project: Lansing Plant Project# B0064480.2013
Collected Date: 06/07/2013
Submitted Date/Time: 06/07/2013 16:00
Sampled by: Robert Prigge
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56799.01	MW-13-26	Groundwater	06/07/2013 10:30
S56799.02	MW-91-2	Groundwater	06/07/2013 14:55
S56799.03	Trip Blank	Water	06/07/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56799.01
Sample Tag: MW-13-26
Collected Date/Time: 06/07/2013 10:30
Matrix: Groundwater
COC Reference: 74288

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/10/13 14:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 19:02	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	06/17/13 19:02	PER	7440-38-2	
Barium	0.044	mg/L	0.010	SW6020	06/17/13 19:02	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	06/17/13 19:02	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 19:02	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/17/13 19:02	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 19:02	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/17/13 19:02	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/17/13 19:02	PER	7439-92-1	
Manganese	0.158	mg/L	0.010	SW6020	06/17/13 19:02	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:04	CCM	7439-97-6	
Nickel	0.019	mg/L	0.010	SW6020	06/17/13 19:02	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020	06/17/13 19:02	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 19:02	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 19:02	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/17/13 19:02	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/17/13 18:54	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	91-58-7	

Lab Sample ID: S56799.01 (continued)
Sample Tag: MW-13-26

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 18:54	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 18:54	PL	118-74-1	

Lab Sample ID: S56799.01 (continued)
Sample Tag: MW-13-26

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/10/13 16:17	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	76-13-1	
Acetone	12	ug/L	10	SW8260B	06/14/13 16:18	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/14/13 16:18	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/14/13 16:18	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/14/13 16:18	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/14/13 16:18	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/14/13 16:18	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	120-82-1	

Lab Sample ID: S56799.01 (continued)
Sample Tag: MW-13-26

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/14/13 16:18	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56799.02
Sample Tag: MW-91-2
Collected Date/Time: 06/07/2013 14:55
Matrix: Groundwater
COC Reference: 74288

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
2	125ml Plastic	HNO3	Yes	5.2	IR
1	125ml Plastic	None	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
Metal Digestion	Completed			3015A	06/17/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/10/13 14:30	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	06/07/13 16:50	JKB	18540-29-9	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 19:05	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	06/17/13 19:04	PER	7440-36-0	
Arsenic, Dissolved	0.008	mg/L	0.002	SW6020	06/17/13 19:05	PER	7440-38-2	
Arsenic	0.027	mg/L	0.002	SW6020	06/17/13 19:04	PER	7440-38-2	
Barium, Dissolved	0.124	mg/L	0.010	SW6020	06/17/13 19:05	PER	7440-39-3	
Barium	0.137	mg/L	0.010	SW6020	06/17/13 19:04	PER	7440-39-3	
Boron, Dissolved	0.04	mg/L	0.04	SW6020	06/17/13 19:05	PER	7440-42-8	
Boron	0.04	mg/L	0.04	SW6020	06/17/13 19:04	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/17/13 19:05	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/17/13 19:04	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 19:05	PER	7440-47-3	
Chromium	0.350	mg/L	0.010	SW6020	06/17/13 19:04	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 19:05	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	06/17/13 19:04	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 19:05	PER	7440-50-8	
Copper	0.026	mg/L	0.002	SW6020	06/17/13 19:04	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 19:05	PER	7439-92-1	
Lead	0.009	mg/L	0.002	SW6020	06/17/13 19:04	PER	7439-92-1	
Manganese, Dissolved	0.058	mg/L	0.010	SW6020	06/17/13 19:05	PER	7439-96-5	
Manganese	0.178	mg/L	0.010	SW6020	06/17/13 19:04	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:08	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:06	CCM	7439-97-6	
Nickel, Dissolved	0.014	mg/L	0.010	SW6020	06/17/13 19:05	PER	7440-02-0	
Nickel	0.042	mg/L	0.010	SW6020	06/17/13 19:04	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	06/17/13 19:05	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	06/17/13 19:04	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/17/13 19:05	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	06/17/13 19:04	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/17/13 19:05	PER	7440-62-2	

Lab Sample ID: S56799.02 (continued)
Sample Tag: MW-91-2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium	Not detected	mg/L	0.002	SW6020	06/17/13 19:04	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	06/17/13 19:05	PER	7440-66-6	
Zinc	0.026	mg/L	0.010	SW6020	06/17/13 19:04	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 19:24	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/17/13 19:24	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	78-59-1	

Lab Sample ID: S56799.02 (continued)
Sample Tag: MW-91-2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 19:24	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/10/13 16:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/14/13 16:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/14/13 16:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/14/13 16:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/14/13 16:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/14/13 16:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	71-43-2	

Lab Sample ID: S56799.02 (continued)
Sample Tag: MW-91-2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/14/13 16:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/14/13 16:41	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56799.03
Sample Tag: Trip Blank
Collected Date/Time: 06/07/2013 00:01
Matrix: Water
COC Reference: 74288

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:25	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/14/13 17:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/14/13 17:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/14/13 17:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/14/13 17:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/14/13 17:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/14/13 17:01	WAT		

Lab Sample ID: S56799.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/14/13 17:01	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

74288

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B00644 02013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Prigge

TURNAROUND TIME REQUIRED: ☑ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED: ☐ STD ☑ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Total Metals (w/Hg)	1,4 dioxane 8260 SIM	hexavalent chromium	Dissolved Metals
56799.01	06/07/13	10:30	MW-13-26	GW	6	X	X	X					3	2		1	3		
.02	06/07/13	14:55	MW-91-2	GW	8	X	X	X					3	2		1	3	1	1
.03	- -	- -	Trip Blank	W	2		X						2						

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	☑ Sampler ARCADIS	06/07/2013	15:35
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	NWA	6-7-13	1525
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		6-7-13	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Talkeetna Freight	6-7-13	1600
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56781.01(01)
Generated on 06/28/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56781.01
Project: Lansing Plant Project# B0064480.2013
Collected Date: 06/06/2013
Submitted Date/Time: 06/07/2013 10:00
Sampled by: Lance Rogers
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56781.01	MW-12-21 (06062013)	Groundwater	06/06/2013 10:06

Analytical Laboratory Report

Lab Sample ID: S56781.01
Sample Tag: MW-12-21 (06062013)
Collected Date/Time: 06/06/2013 10:06
Matrix: Groundwater
COC Reference: 74272

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/11/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	06/11/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/13/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 14:20	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 14:18	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 14:20	PER	7440-38-2	
Arsenic	0.002	mg/L	0.002	SW6020	06/27/13 14:18	PER	7440-38-2	
Barium, Dissolved	0.037	mg/L	0.010	SW6020	06/27/13 14:20	PER	7440-39-3	
Barium	0.039	mg/L	0.010	SW6020	06/27/13 14:18	PER	7440-39-3	
Boron, Dissolved	0.38	mg/L	0.04	SW6020	06/27/13 14:20	PER	7440-42-8	
Boron	0.37	mg/L	0.04	SW6020	06/27/13 14:18	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/27/13 14:20	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 14:18	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/27/13 14:20	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 14:18	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/27/13 14:20	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 14:18	PER	7440-48-4	
Copper, Dissolved	0.006	mg/L	0.002	SW6020	06/27/13 14:20	PER	7440-50-8	
Copper	0.023	mg/L	0.002	SW6020	06/27/13 14:18	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 14:20	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	06/27/13 14:18	PER	7439-92-1	
Manganese, Dissolved	0.347	mg/L	0.010	SW6020	06/27/13 14:20	PER	7439-96-5	
Manganese	0.366	mg/L	0.010	SW6020	06/27/13 14:18	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:02	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/11/13 15:00	CCM	7439-97-6	
Nickel, Dissolved	0.092	mg/L	0.010	SW6020	06/27/13 14:20	PER	7440-02-0	
Nickel	0.087	mg/L	0.010	SW6020	06/27/13 14:18	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	06/27/13 14:20	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	06/27/13 14:18	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/27/13 14:20	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 14:18	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 14:20	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	06/27/13 14:18	PER	7440-62-2	
Zinc, Dissolved	0.392	mg/L	0.010	SW6020	06/27/13 14:20	PER	7440-66-6	
Zinc	0.405	mg/L	0.010	SW6020	06/27/13 14:18	PER	7440-66-6	

Lab Sample ID: S56781.01 (continued)
Sample Tag: MW-12-21 (06062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 18:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/17/13 18:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	88-75-5	

Lab Sample ID: S56781.01 (continued)
Sample Tag: MW-12-21 (06062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 18:25	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	510	ug/L	50	SW8260B - SIM	06/18/13 19:29	WAT	123-91-1	Y
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/20/13 03:36	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/20/13 03:36	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/20/13 03:36	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/20/13 03:36	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/20/13 03:36	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-27-4	

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S56781.01 (continued)
Sample Tag: MW-12-21 (06062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	10061-01-5	
Toluene	2	ug/L	1	SW8260B	06/20/13 03:36	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/20/13 03:36	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/20/13 03:36	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74272

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task#

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B00644 .2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Lance Rogers / Lance M Rogers

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/flg) Tot and Dissolved	Special Instructions
56781.01	6/6	1006	MW-12-21 (06062013)	GW	7	2	3	2					X	X		X	NOTE: Dissolved metals are field filtered

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Lance M Rogers ARCADIS ☐ Sampler DATE: 6-6-13 TIME: 1115
RECEIVED BY: SIGNATURE/ORGANIZATION: FME DATE: 6/6/13 TIME: 11:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION: FME DATE: 6/6/13 TIME: 19:00
RECEIVED BY: SIGNATURE/ORGANIZATION: PM Storage DATE: 6/6/13 TIME: 19:09

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 6-7-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Frantz DATE: 6-7-13 TIME: 1000

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 6.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56819.01(01)
Generated on 06/28/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56819.01
Project: Lansing Plant 3 Project# B0064480.2013
Collected Date: 06/07/2013
Submitted Date/Time: 06/11/2013 09:50
Sampled by: Rob
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56819.01	EB-13	Groundwater	06/07/2013 16:05

Analytical Laboratory Report

Lab Sample ID: S56819.01
Sample Tag: EB-13
Collected Date/Time: 06/07/2013 16:05
Matrix: Groundwater
COC Reference: 74287

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/12/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/14/13 12:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 15:33	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/27/13 15:33	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/27/13 15:33	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/27/13 15:33	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 15:33	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 15:33	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 15:33	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/27/13 15:33	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/27/13 15:33	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/27/13 15:33	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/12/13 15:04	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/27/13 15:33	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/27/13 15:33	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 15:33	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/27/13 15:33	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/27/13 15:33	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	91-58-7	

Lab Sample ID: S56819.01 (continued)
Sample Tag: EB-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 21:21	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/17/13 21:21	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 21:21	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S56819.01 (continued)
Sample Tag: EB-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/13/13 18:57	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/13/13 18:57	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/13/13 18:57	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/13/13 18:57	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/13/13 18:57	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/13/13 18:57	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/13/13 18:57	JGH	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74287

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task#

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 3 Project#: B00644 .2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: ROB

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs TCL	SVOCs TCL	PCBs	Metals (w/Hg) TAL	1-4 Dioxane (Geo)					
56819.01	6/07/13	1605	EB-13	GW	6	2	3	1					X	X		X						

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] Sampler NO DATE: 06/07/13 TIME: 1605
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] DATE: 6/7/13 TIME: 1605

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] DATE: 6-11-13 TIME: 915
RECEIVED BY: SIGNATURE/ORGANIZATION: Talitha Faust DATE: 6-11-13 TIME: 930

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] Mail DATE: 6-11-13 TIME: 915

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56820.01(01)
Generated on 06/28/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56820.01-S56820.05
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 06/10/2013
Submitted Date/Time: 06/11/2013 09:50
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56820.01	Trip Blank	Liquid	06/10/2013 08:00
S56820.02	MW-03-07	Groundwater	06/10/2013 11:33
S56820.03	Dup #7	Groundwater	06/10/2013 00:01
S56820.04	B-BP-16	Groundwater	06/10/2013 14:30
S56820.05	MWBP-12-UST 1-4	Groundwater	06/10/2013 16:38

Analytical Laboratory Report

Lab Sample ID: S56820.01
Sample Tag: Trip Blank
Collected Date/Time: 06/10/2013 08:00
Matrix: Liquid
COC Reference: 74286

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/18/13 17:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/18/13 17:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/18/13 17:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/18/13 17:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/18/13 17:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/18/13 17:27	WAT		

Lab Sample ID: S56820.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/18/13 17:27	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56820.02
Sample Tag: MW-03-07
Collected Date/Time: 06/10/2013 11:33
Matrix: Groundwater
COC Reference: 74286

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/12/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 14:22	PER	7440-36-0	
Arsenic	0.018	mg/L	0.002	SW6020	06/27/13 14:22	PER	7440-38-2	
Barium	0.245	mg/L	0.010	SW6020	06/27/13 14:22	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	06/27/13 14:22	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 14:22	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 14:22	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 14:22	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/27/13 14:22	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/27/13 14:22	PER	7439-92-1	
Manganese	0.076	mg/L	0.010	SW6020	06/27/13 14:22	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/12/13 14:46	CCM	7439-97-6	
Nickel	0.020	mg/L	0.010	SW6020	06/27/13 14:22	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/27/13 14:22	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 14:22	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/27/13 14:22	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/27/13 14:22	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	91-58-7	

Lab Sample ID: S56820.02 (continued)
Sample Tag: MW-03-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 21:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/17/13 21:50	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 21:50	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S56820.02 (continued)
Sample Tag: MW-03-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	28	ug/L	5	SW8260B - SIM	06/19/13 16:32	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/18/13 17:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/18/13 17:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/18/13 17:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/18/13 17:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/18/13 17:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/18/13 17:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	120-82-1	

Lab Sample ID: S56820.02 (continued)
Sample Tag: MW-03-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/18/13 17:48	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56820.03
Sample Tag: Dup #7
Collected Date/Time: 06/10/2013 00:01
Matrix: Groundwater
COC Reference: 74286

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/12/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 14:24	PER	7440-36-0	
Arsenic	0.018	mg/L	0.002	SW6020	06/27/13 14:24	PER	7440-38-2	
Barium	0.249	mg/L	0.010	SW6020	06/27/13 14:24	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	06/27/13 14:24	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 14:24	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 14:24	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 14:24	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/27/13 14:24	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/27/13 14:24	PER	7439-92-1	
Manganese	0.073	mg/L	0.010	SW6020	06/27/13 14:24	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/12/13 14:48	CCM	7439-97-6	
Nickel	0.016	mg/L	0.010	SW6020	06/27/13 14:24	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/27/13 14:24	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 14:24	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/27/13 14:24	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/27/13 14:24	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	91-58-7	

Lab Sample ID: S56820.03 (continued)
Sample Tag: Dup #7

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 22:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/17/13 22:20	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 22:20	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S56820.03 (continued)
Sample Tag: Dup #7

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	29	ug/L	5	SW8260B - SIM	06/19/13 16:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/18/13 18:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/18/13 18:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/18/13 18:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/18/13 18:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/18/13 18:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/18/13 18:08	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	120-82-1	

Lab Sample ID: S56820.03 (continued)
Sample Tag: Dup #7

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/18/13 18:08	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56820.04
Sample Tag: B-BP-16
Collected Date/Time: 06/10/2013 14:30
Matrix: Groundwater
COC Reference: 74286

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/12/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 14:36	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	06/27/13 14:36	PER	7440-38-2	
Barium	0.253	mg/L	0.010	SW6020	06/27/13 14:36	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	06/27/13 14:36	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 14:36	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 14:36	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 14:36	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/27/13 14:36	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/27/13 14:36	PER	7439-92-1	
Manganese	0.308	mg/L	0.010	SW6020	06/27/13 14:36	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/12/13 14:50	CCM	7439-97-6	
Nickel	0.034	mg/L	0.010	SW6020	06/27/13 14:36	PER	7440-02-0	
Selenium	0.010	mg/L	0.005	SW6020	06/27/13 14:36	PER	7782-49-2	
Silver	0.00070	mg/L	0.0005	SW6020	06/27/13 14:36	PER	7440-22-4	
Vanadium	0.006	mg/L	0.002	SW6020	06/27/13 14:36	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/27/13 14:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	101-55-3	
di-n-Butyl phthalate	3	ug/L	1	SW8270C	06/17/13 23:18	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	91-58-7	

Lab Sample ID: S56820.04 (continued)
Sample Tag: B-BP-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 23:18	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	3	ug/L	1	SW8270C	06/17/13 23:18	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 23:18	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S56820.04 (continued)
Sample Tag: B-BP-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 17:16	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	76-13-1	X
Acetone	Not detected	ug/L	50	SW8260B	06/18/13 20:54	WAT	67-64-1	X
Carbon disulfide	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-15-0	X
Methyl Acetate	Not detected	ug/L	50	SW8260B	06/18/13 20:54	WAT	79-20-9	X
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	1634-04-4	X
2-Butanone (MEK)	Not detected	ug/L	50	SW8260B	06/18/13 20:54	WAT	78-93-3	X
Dichlorodifluoromethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-71-8	X
Chloromethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	74-87-3	X
Vinyl chloride	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-01-4	X
Bromomethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	74-83-9	X
Chloroethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-00-3	X
Trichlorofluoromethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-69-4	X
1,1-Dichloroethene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-35-4	X
Methylene chloride	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-09-2	X
trans-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	156-60-5	X
1,1-Dichloroethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-34-3	X
cis-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	156-59-2	X
Chloroform	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	67-66-3	X
1,1,1-Trichloroethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	71-55-6	X
Cyclohexane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	110-82-7	X
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	SW8260B	06/18/13 20:54	WAT	108-10-1	X
2-Hexanone	Not detected	ug/L	50	SW8260B	06/18/13 20:54	WAT	591-78-6	X
Carbon tetrachloride	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	56-23-5	X
Benzene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	71-43-2	X
1,2-Dichloroethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	107-06-2	X
Trichloroethene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	79-01-6	X
1,2-Dichloropropane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	78-87-5	X
Bromodichloromethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-27-4	X
Methyl cyclohexane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	108-87-2	X
cis-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	10061-01-5	X
Toluene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	108-88-3	X
trans-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	10061-02-6	X
1,1,2-Trichloroethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	79-00-5	X
Tetrachloroethene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	127-18-4	X
Dibromochloromethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	124-48-1	X
Chlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	108-90-7	X
1,1,2,2-Tetrachloroethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	79-34-5	X
Ethylbenzene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	100-41-4	X
p,m-Xylene	Not detected	ug/L	10	SW8260B	06/18/13 20:54	WAT		X
o-Xylene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	95-47-6	X
Styrene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	100-42-5	X
Isopropylbenzene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	98-82-8	X
Bromoform	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	75-25-2	X
1,3-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	541-73-1	X
1,4-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	106-46-7	X
1,2-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	95-50-1	X

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S56820.04 (continued)
Sample Tag: B-BP-16

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	120-82-1	X
1,2-Dibromoethane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	106-93-4	X
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	SW8260B	06/18/13 20:54	WAT	96-12-8	X

X-Elevated reporting limit due to matrix interference

Analytical Laboratory Report

Lab Sample ID: S56820.05
Sample Tag: MWBP-12-UST 1-4
Collected Date/Time: 06/10/2013 16:38
Matrix: Groundwater
COC Reference: 74286

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/12/13 11:00	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 14:38	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020	06/27/13 14:38	PER	7440-38-2	
Barium	0.130	mg/L	0.010	SW6020	06/27/13 14:38	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	06/27/13 14:38	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 14:38	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 14:38	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 14:38	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/27/13 14:38	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/27/13 14:38	PER	7439-92-1	
Manganese	0.146	mg/L	0.010	SW6020	06/27/13 14:38	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/12/13 14:52	CCM	7439-97-6	
Nickel	0.023	mg/L	0.010	SW6020	06/27/13 14:38	PER	7440-02-0	
Selenium	0.010	mg/L	0.005	SW6020	06/27/13 14:38	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 14:38	PER	7440-22-4	
Vanadium	0.009	mg/L	0.002	SW6020	06/27/13 14:38	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/27/13 14:38	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/17/13 23:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	91-58-7	

Lab Sample ID: S56820.05 (continued)
Sample Tag: MWBP-12-UST 1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/17/13 23:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	4	ug/L	1	SW8270C	06/17/13 23:47	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/17/13 23:47	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S56820.05 (continued)
Sample Tag: MWBP-12-UST 1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 17:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	76-13-1	X
Acetone	Not detected	ug/L	50	SW8260B	06/18/13 21:15	WAT	67-64-1	X
Carbon disulfide	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-15-0	X
Methyl Acetate	Not detected	ug/L	50	SW8260B	06/18/13 21:15	WAT	79-20-9	X
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	1634-04-4	X
2-Butanone (MEK)	Not detected	ug/L	50	SW8260B	06/18/13 21:15	WAT	78-93-3	X
Dichlorodifluoromethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-71-8	X
Chloromethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	74-87-3	X
Vinyl chloride	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-01-4	X
Bromomethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	74-83-9	X
Chloroethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-00-3	X
Trichlorofluoromethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-69-4	X
1,1-Dichloroethene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-35-4	X
Methylene chloride	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-09-2	X
trans-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	156-60-5	X
1,1-Dichloroethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-34-3	X
cis-1,2-Dichloroethene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	156-59-2	X
Chloroform	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	67-66-3	X
1,1,1-Trichloroethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	71-55-6	X
Cyclohexane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	110-82-7	X
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	SW8260B	06/18/13 21:15	WAT	108-10-1	X
2-Hexanone	Not detected	ug/L	50	SW8260B	06/18/13 21:15	WAT	591-78-6	X
Carbon tetrachloride	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	56-23-5	X
Benzene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	71-43-2	X
1,2-Dichloroethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	107-06-2	X
Trichloroethene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	79-01-6	X
1,2-Dichloropropane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	78-87-5	X
Bromodichloromethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-27-4	X
Methyl cyclohexane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	108-87-2	X
cis-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	10061-01-5	X
Toluene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	108-88-3	X
trans-1,3-Dichloropropene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	10061-02-6	X
1,1,2-Trichloroethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	79-00-5	X
Tetrachloroethene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	127-18-4	X
Dibromochloromethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	124-48-1	X
Chlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	108-90-7	X
1,1,2,2-Tetrachloroethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	79-34-5	X
Ethylbenzene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	100-41-4	X
p,m-Xylene	Not detected	ug/L	10	SW8260B	06/18/13 21:15	WAT		X
o-Xylene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	95-47-6	X
Styrene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	100-42-5	X
Isopropylbenzene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	98-82-8	X
Bromoform	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	75-25-2	X
1,3-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	541-73-1	X
1,4-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	106-46-7	X
1,2-Dichlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	95-50-1	X

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S56820.05 (continued)
Sample Tag: MWBP-12-UST 1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2,4-Trichlorobenzene	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	120-82-1	X
1,2-Dibromoethane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	106-93-4	X
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	SW8260B	06/18/13 21:15	WAT	96-12-8	X

X-Elevated reporting limit due to matrix interference

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74286

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task# 00603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE STELTER

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1-4 dioxane (SIMS)
56820.01	6/10	0800	TRIP BLANK	L	1		1						X				
.02	6/10	1133	MW-03-07	GW	6	2	3	1					X	X		X	X
.03	6/10		Dup #7	GW	6	2	3	1					X	X		X	X
.04	6/10	1430	B-BP-16	GW	6	2	3	1					X	X		X	X
.05	6/10	1638	MW BP-12-UST 1-4	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE	TIME
		6/10/13	1620
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Fm Storage		6/10/13	1620
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		6-11-13	915

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		6-11-13	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Tabitha Fawcett		6-11-13	950

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.5
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56844.01(01)
Generated on 06/28/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56844.01-S56844.07
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 06/11/2013
Submitted Date/Time: 06/12/2013 10:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56844.01	Trip Blank	Liquid	06/11/2013 08:00
S56844.02	P6-SB-37	Groundwater	06/11/2013 11:30
S56844.03	P6-SB-37 MS	Groundwater	06/11/2013 11:30
S56844.04	P6-SB-37 MSD	Groundwater	06/11/2013 11:30
S56844.05	MW-02-03 (6)	Groundwater	06/11/2013 13:30
S56844.06	P6-SB-32	Groundwater	06/11/2013 16:14
S56844.07	EB-14	Liquid	06/11/2013 16:59

Analytical Laboratory Report

Lab Sample ID: S56844.01
Sample Tag: Trip Blank
Collected Date/Time: 06/11/2013 08:00
Matrix: Liquid
COC Reference: 74284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/22/13 17:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/22/13 17:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/22/13 17:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/22/13 17:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/22/13 17:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/22/13 17:51	WAT		

Lab Sample ID: S56844.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/22/13 17:51	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56844.02
Sample Tag: P6-SB-37
Collected Date/Time: 06/11/2013 11:30
Matrix: Groundwater
COC Reference: 74284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/13/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 16:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 16:34	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	06/27/13 16:34	PER	7440-38-2	
Barium	0.037	mg/L	0.010	SW6020	06/27/13 16:34	PER	7440-39-3	
Boron	0.23	mg/L	0.04	SW6020	06/27/13 16:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 16:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 16:34	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 16:34	PER	7440-48-4	
Copper	0.002	mg/L	0.002	SW6020	06/27/13 16:34	PER	7440-50-8	
Lead	0.003	mg/L	0.002	SW6020	06/27/13 16:34	PER	7439-92-1	
Manganese	0.019	mg/L	0.010	SW6020	06/27/13 16:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/13/13 15:22	CCM	7439-97-6	
Nickel	0.023	mg/L	0.010	SW6020	06/27/13 16:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/27/13 16:34	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 16:34	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/27/13 16:34	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/27/13 16:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/24/13 19:17	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	91-58-7	

Lab Sample ID: S56844.02 (continued)
Sample Tag: P6-SB-37

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/24/13 19:17	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/24/13 19:17	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/24/13 19:17	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/24/13 19:17	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S56844.02 (continued)
Sample Tag: P6-SB-37

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/21/13 19:17	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/22/13 17:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/22/13 17:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/22/13 17:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/22/13 17:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/22/13 17:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	107-06-2	
Trichloroethene	2	ug/L	1	SW8260B	06/22/13 17:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/22/13 17:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	120-82-1	

Lab Sample ID: S56844.02 (continued)
Sample Tag: P6-SB-37

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/22/13 17:31	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56844.03
Sample Tag: P6-SB-37 MS
Collected Date/Time: 06/11/2013 11:30
Matrix: Groundwater
COC Reference: 74284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/13/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 16:25	WAT		
Metals								
Antimony	0.247	mg/L	0.002	SW6020	06/27/13 16:36	PER	7440-36-0	
Arsenic	0.252	mg/L	0.002	SW6020	06/27/13 16:36	PER	7440-38-2	
Barium	0.287	mg/L	0.010	SW6020	06/27/13 16:36	PER	7440-39-3	
Boron	0.50	mg/L	0.04	SW6020	06/27/13 16:36	PER	7440-42-8	
Cadmium	0.250	mg/L	0.0010	SW6020	06/27/13 16:36	PER	7440-43-9	
Chromium	0.248	mg/L	0.010	SW6020	06/27/13 16:36	PER	7440-47-3	
Cobalt	0.242	mg/L	0.010	SW6020	06/27/13 16:36	PER	7440-48-4	
Copper	0.236	mg/L	0.002	SW6020	06/27/13 16:36	PER	7440-50-8	
Lead	0.234	mg/L	0.002	SW6020	06/27/13 16:36	PER	7439-92-1	
Manganese	0.254	mg/L	0.010	SW6020	06/27/13 16:36	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	06/13/13 15:24	CCM	7439-97-6	
Nickel	0.254	mg/L	0.010	SW6020	06/27/13 16:36	PER	7440-02-0	
Selenium	0.272	mg/L	0.005	SW6020	06/27/13 16:36	PER	7782-49-2	
Silver	0.241	mg/L	0.0005	SW6020	06/27/13 16:36	PER	7440-22-4	
Vanadium	0.250	mg/L	0.002	SW6020	06/27/13 16:36	PER	7440-62-2	
Zinc	0.241	mg/L	0.010	SW6020	06/27/13 16:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	32	ug/L	1	SW8270C	06/24/13 19:47	PL	83-32-9	1
Acenaphthylene	30	ug/L	1	SW8270C	06/24/13 19:47	PL	208-96-8	1
Acetophenone	26	ug/L	1	SW8270C	06/24/13 19:47	PL	98-86-2	1
Anthracene	30	ug/L	1	SW8270C	06/24/13 19:47	PL	120-12-7	1
Atrazine	29	ug/L	1	SW8270C	06/24/13 19:47	PL	1912-24-9	1
1,1'-Biphenyl	26	ug/L	1	SW8270C	06/24/13 19:47	PL	92-52-4	1
4-Bromophenyl phenyl ether	29	ug/L	1	SW8270C	06/24/13 19:47	PL	101-55-3	1
di-n-Butyl phthalate	35	ug/L	1	SW8270C	06/24/13 19:47	PL	84-74-2	1
Benzaldehyde	26	ug/L	1	SW8270C	06/24/13 19:47	PL	100-52-7	1
Benzo(a)anthracene	30	ug/L	1	SW8270C	06/24/13 19:47	PL	56-55-3	1
Benzo(a)pyrene	29	ug/L	1	SW8270C	06/24/13 19:47	PL	50-32-8	1
Benzo(b)fluoranthene	27	ug/L	1	SW8270C	06/24/13 19:47	PL	205-99-2	1
Benzo(ghi)perylene	34	ug/L	1	SW8270C	06/24/13 19:47	PL	191-24-2	1
Benzo(k)fluoranthene	26	ug/L	1	SW8270C	06/24/13 19:47	PL	207-08-9	1
Butyl benzyl phthalate	30	ug/L	1	SW8270C	06/24/13 19:47	PL	85-68-7	1

1-Sample spiked at 51 mg/l

Lab Sample ID: S56844.03 (continued)
Sample Tag: P6-SB-37 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	27	ug/L	1	SW8270C	06/24/13 19:47	PL	91-58-7	1
2-Chlorophenol	24	ug/L	1	SW8270C	06/24/13 19:47	PL	95-57-8	1
4-Chloro-3-methylphenol	28	ug/L	1	SW8270C	06/24/13 19:47	PL	59-50-7	1
4-Chloroaniline	18	ug/L	1	SW8270C	06/24/13 19:47	PL	106-47-8	1
4-Chlorophenyl phenyl ether	35	ug/L	1	SW8270C	06/24/13 19:47	PL	7005-72-3	1
Caprolactam	5	ug/L	1	SW8270C	06/24/13 19:47	PL	105-60-2	1
Carbazole	29	ug/L	1	SW8270C	06/24/13 19:47	PL	86-74-8	1
bis(2-Chloroethoxy)methane	25	ug/L	1	SW8270C	06/24/13 19:47	PL	111-91-1	1
bis(2-Chloroethyl)ether	24	ug/L	1	SW8270C	06/24/13 19:47	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	22	ug/L	1	SW8270C	06/24/13 19:47	PL	108-60-1	1
Chrysene	30	ug/L	1	SW8270C	06/24/13 19:47	PL	218-01-9	1
2,4-Dichlorophenol	27	ug/L	1	SW8270C	06/24/13 19:47	PL	120-83-2	1
2,4-Dimethylphenol	28	ug/L	1	SW8270C	06/24/13 19:47	PL	105-67-9	1
2,4-Dinitrophenol	26	ug/L	1	SW8270C	06/24/13 19:47	PL	51-28-5	1
2,4-Dinitrotoluene	31	ug/L	1	SW8270C	06/24/13 19:47	PL	121-14-2	1
2,6-Dinitrotoluene	35	ug/L	1	SW8270C	06/24/13 19:47	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	27	ug/L	1	SW8270C	06/24/13 19:47	PL	534-52-1	1
Dibenzo(ah)anthracene	35	ug/L	2	SW8270C	06/24/13 19:47	PL	53-70-3	1
Dibenzofuran	28	ug/L	1	SW8270C	06/24/13 19:47	PL	132-64-9	1
Diethyl phthalate	30	ug/L	2	SW8270C	06/24/13 19:47	PL	84-66-2	1
Dimethyl phthalate	30	ug/L	1	SW8270C	06/24/13 19:47	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	32	ug/L	1	SW8270C	06/24/13 19:47	PL	117-81-7	1B
Fluoranthene	30	ug/L	1	SW8270C	06/24/13 19:47	PL	206-44-0	1
Fluorene	29	ug/L	1	SW8270C	06/24/13 19:47	PL	86-73-7	1
Hexachlorobutadiene	24	ug/L	1	SW8270C	06/24/13 19:47	PL	87-68-3	1
Hexachlorocyclopentadiene	25	ug/L	1	SW8270C	06/24/13 19:47	PL	77-47-4	1
Hexachloroethane	21	ug/L	1	SW8270C	06/24/13 19:47	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	32	ug/L	1	SW8270C	06/24/13 19:47	PL	193-39-5	1
Isophorone	29	ug/L	1	SW8270C	06/24/13 19:47	PL	78-59-1	1
2-Methylnaphthalene	26	ug/L	1	SW8270C	06/24/13 19:47	PL	91-57-6	1
2-Methylphenol	23	ug/L	1	SW8270C	06/24/13 19:47	PL	95-48-7	1
3-, 4-Methylphenol	44	ug/L	1	SW8270C	06/24/13 19:47	PL	3/4-Cresol	1
2-Nitroaniline	29	ug/L	1	SW8270C	06/24/13 19:47	PL	88-74-4	1
2-Nitrophenol	25	ug/L	1	SW8270C	06/24/13 19:47	PL	88-75-5	1
3-Nitroaniline	21	ug/L	1	SW8270C	06/24/13 19:47	PL	99-09-2	1
4-Nitroaniline	28	ug/L	1	SW8270C	06/24/13 19:47	PL	100-01-6	1
4-Nitrophenol	21	ug/L	1	SW8270C	06/24/13 19:47	PL	100-02-7	1
N-Nitrosodi-n-propylamine	26	ug/L	1	SW8270C	06/24/13 19:47	PL	621-64-7	1
N-Nitrosodiphenylamine	29	ug/L	1	SW8270C	06/24/13 19:47	PL	86-30-6	1
Naphthalene	25	ug/L	1	SW8270C	06/24/13 19:47	PL	91-20-3	1
Nitrobenzene	25	ug/L	1	SW8270C	06/24/13 19:47	PL	98-95-3	1
di-n-Octyl phthalate	28	ug/L	1	SW8270C	06/24/13 19:47	PL	117-84-0	1
Pentachlorophenol	30	ug/L	1	SW8270C	06/24/13 19:47	PL	87-86-5	1
Phenanthrene	33	ug/L	1	SW8270C	06/24/13 19:47	PL	85-01-8	1
Phenol	14	ug/L	1	SW8270C	06/24/13 19:47	PL	108-95-2	1
Pyrene	28	ug/L	1	SW8270C	06/24/13 19:47	PL	129-00-0	1
2,4,5-Trichlorophenol	30	ug/L	1	SW8270C	06/24/13 19:47	PL	95-95-4	1

1-Sample spiked at 51 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S56844.03 (continued)
Sample Tag: P6-SB-37 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	29	ug/L	1	SW8270C	06/24/13 19:47	PL	88-06-2	1
Hexachlorobenzene	29	ug/L	1	SW8270C	06/24/13 19:47	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	48	ug/L	5	SW8260B - SIM	06/21/13 21:51	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	44	ug/L	1	SW8260B	06/22/13 15:30	WAT	76-13-1	2
Acetone	83	ug/L	10	SW8260B	06/22/13 15:30	WAT	67-64-1	2
Carbon disulfide	50	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-15-0	2
Methyl Acetate	69	ug/L	10	SW8260B	06/22/13 15:30	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	64	ug/L	1	SW8260B	06/22/13 15:30	WAT	1634-04-4	2
2-Butanone (MEK)	76	ug/L	10	SW8260B	06/22/13 15:30	WAT	78-93-3	2
Dichlorodifluoromethane	36	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-71-8	2
Chloromethane	49	ug/L	1	SW8260B	06/22/13 15:30	WAT	74-87-3	2
Vinyl chloride	50	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-01-4	2
Bromomethane	43	ug/L	1	SW8260B	06/22/13 15:30	WAT	74-83-9	2
Chloroethane	52	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-00-3	2
Trichlorofluoromethane	45	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-69-4	2
1,1-Dichloroethene	49	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-35-4	2
Methylene chloride	45	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	06/22/13 15:30	WAT	156-60-5	2
1,1-Dichloroethane	51	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-34-3	2
cis-1,2-Dichloroethene	49	ug/L	1	SW8260B	06/22/13 15:30	WAT	156-59-2	2
Chloroform	45	ug/L	1	SW8260B	06/22/13 15:30	WAT	67-66-3	2
1,1,1-Trichloroethane	46	ug/L	1	SW8260B	06/22/13 15:30	WAT	71-55-6	2
Cyclohexane	53	ug/L	1	SW8260B	06/22/13 15:30	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	84	ug/L	10	SW8260B	06/22/13 15:30	WAT	108-10-1	2
2-Hexanone	92	ug/L	10	SW8260B	06/22/13 15:30	WAT	591-78-6	2
Carbon tetrachloride	47	ug/L	1	SW8260B	06/22/13 15:30	WAT	56-23-5	2
Benzene	49	ug/L	1	SW8260B	06/22/13 15:30	WAT	71-43-2	2
1,2-Dichloroethane	54	ug/L	1	SW8260B	06/22/13 15:30	WAT	107-06-2	2
Trichloroethene	48	ug/L	1	SW8260B	06/22/13 15:30	WAT	79-01-6	2
1,2-Dichloropropane	54	ug/L	1	SW8260B	06/22/13 15:30	WAT	78-87-5	2
Bromodichloromethane	51	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-27-4	2
Methyl cyclohexane	55	ug/L	1	SW8260B	06/22/13 15:30	WAT	108-87-2	2
cis-1,3-Dichloropropene	50	ug/L	1	SW8260B	06/22/13 15:30	WAT	10061-01-5	2
Toluene	49	ug/L	1	SW8260B	06/22/13 15:30	WAT	108-88-3	2
trans-1,3-Dichloropropene	52	ug/L	1	SW8260B	06/22/13 15:30	WAT	10061-02-6	2
1,1,2-Trichloroethane	54	ug/L	1	SW8260B	06/22/13 15:30	WAT	79-00-5	2
Tetrachloroethene	46	ug/L	1	SW8260B	06/22/13 15:30	WAT	127-18-4	2
Dibromochloromethane	56	ug/L	1	SW8260B	06/22/13 15:30	WAT	124-48-1	2
Chlorobenzene	52	ug/L	1	SW8260B	06/22/13 15:30	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	64	ug/L	1	SW8260B	06/22/13 15:30	WAT	79-34-5	2
Ethylbenzene	54	ug/L	1	SW8260B	06/22/13 15:30	WAT	100-41-4	2
p,m-Xylene	110	ug/L	2	SW8260B	06/22/13 15:30	WAT		2
o-Xylene	55	ug/L	1	SW8260B	06/22/13 15:30	WAT	95-47-6	2

1-Sample spiked at 51 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56844.03 (continued)
Sample Tag: P6-SB-37 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	51	ug/L	1	SW8260B	06/22/13 15:30	WAT	100-42-5	1
Isopropylbenzene	53	ug/L	1	SW8260B	06/22/13 15:30	WAT	98-82-8	1
Bromoform	66	ug/L	1	SW8260B	06/22/13 15:30	WAT	75-25-2	1
1,3-Dichlorobenzene	50	ug/L	1	SW8260B	06/22/13 15:30	WAT	541-73-1	1
1,4-Dichlorobenzene	50	ug/L	1	SW8260B	06/22/13 15:30	WAT	106-46-7	1
1,2-Dichlorobenzene	50	ug/L	1	SW8260B	06/22/13 15:30	WAT	95-50-1	1
1,2,4-Trichlorobenzene	50	ug/L	1	SW8260B	06/22/13 15:30	WAT	120-82-1	1
1,2-Dibromoethane	62	ug/L	1	SW8260B	06/22/13 15:30	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	76	ug/L	1	SW8260B	06/22/13 15:30	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S56844.04
Sample Tag: P6-SB-37 MSD
Collected Date/Time: 06/11/2013 11:30
Matrix: Groundwater
COC Reference: 74284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/13/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 16:25	WAT		
Metals								
Antimony	0.254	mg/L	0.002	SW6020	06/27/13 16:38	PER	7440-36-0	
Arsenic	0.266	mg/L	0.002	SW6020	06/27/13 16:38	PER	7440-38-2	
Barium	0.285	mg/L	0.010	SW6020	06/27/13 16:38	PER	7440-39-3	
Boron	0.50	mg/L	0.04	SW6020	06/27/13 16:38	PER	7440-42-8	
Cadmium	0.250	mg/L	0.0010	SW6020	06/27/13 16:38	PER	7440-43-9	
Chromium	0.246	mg/L	0.010	SW6020	06/27/13 16:38	PER	7440-47-3	
Cobalt	0.240	mg/L	0.010	SW6020	06/27/13 16:38	PER	7440-48-4	
Copper	0.237	mg/L	0.002	SW6020	06/27/13 16:38	PER	7440-50-8	
Lead	0.234	mg/L	0.002	SW6020	06/27/13 16:38	PER	7439-92-1	
Manganese	0.253	mg/L	0.010	SW6020	06/27/13 16:38	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	06/13/13 15:26	CCM	7439-97-6	
Nickel	0.255	mg/L	0.010	SW6020	06/27/13 16:38	PER	7440-02-0	
Selenium	0.258	mg/L	0.005	SW6020	06/27/13 16:38	PER	7782-49-2	
Silver	0.240	mg/L	0.0005	SW6020	06/27/13 16:38	PER	7440-22-4	
Vanadium	0.249	mg/L	0.002	SW6020	06/27/13 16:38	PER	7440-62-2	
Zinc	0.249	mg/L	0.010	SW6020	06/27/13 16:38	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	46	ug/L	1	SW8270C	06/24/13 20:16	PL	83-32-9	1
Acenaphthylene	43	ug/L	1	SW8270C	06/24/13 20:16	PL	208-96-8	1
Acetophenone	39	ug/L	1	SW8270C	06/24/13 20:16	PL	98-86-2	1
Anthracene	44	ug/L	1	SW8270C	06/24/13 20:16	PL	120-12-7	1
Atrazine	45	ug/L	1	SW8270C	06/24/13 20:16	PL	1912-24-9	1
1,1'-Biphenyl	39	ug/L	1	SW8270C	06/24/13 20:16	PL	92-52-4	1
4-Bromophenyl phenyl ether	42	ug/L	1	SW8270C	06/24/13 20:16	PL	101-55-3	1
di-n-Butyl phthalate	50	ug/L	1	SW8270C	06/24/13 20:16	PL	84-74-2	1
Benzaldehyde	41	ug/L	1	SW8270C	06/24/13 20:16	PL	100-52-7	1
Benzo(a)anthracene	44	ug/L	1	SW8270C	06/24/13 20:16	PL	56-55-3	1
Benzo(a)pyrene	41	ug/L	1	SW8270C	06/24/13 20:16	PL	50-32-8	1
Benzo(b)fluoranthene	39	ug/L	1	SW8270C	06/24/13 20:16	PL	205-99-2	1
Benzo(ghi)perylene	48	ug/L	1	SW8270C	06/24/13 20:16	PL	191-24-2	1
Benzo(k)fluoranthene	38	ug/L	1	SW8270C	06/24/13 20:16	PL	207-08-9	1
Butyl benzyl phthalate	44	ug/L	1	SW8270C	06/24/13 20:16	PL	85-68-7	1

1-Sample spiked at 51 mg/l

Lab Sample ID: S56844.04 (continued)
Sample Tag: P6-SB-37 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	40	ug/L	1	SW8270C	06/24/13 20:16	PL	91-58-7	1
2-Chlorophenol	36	ug/L	1	SW8270C	06/24/13 20:16	PL	95-57-8	1
4-Chloro-3-methylphenol	44	ug/L	1	SW8270C	06/24/13 20:16	PL	59-50-7	1
4-Chloroaniline	25	ug/L	1	SW8270C	06/24/13 20:16	PL	106-47-8	1
4-Chlorophenyl phenyl ether	51	ug/L	1	SW8270C	06/24/13 20:16	PL	7005-72-3	1
Caprolactam	7	ug/L	1	SW8270C	06/24/13 20:16	PL	105-60-2	1
Carbazole	43	ug/L	1	SW8270C	06/24/13 20:16	PL	86-74-8	1
bis(2-Chloroethoxy)methane	37	ug/L	1	SW8270C	06/24/13 20:16	PL	111-91-1	1
bis(2-Chloroethyl)ether	36	ug/L	1	SW8270C	06/24/13 20:16	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	33	ug/L	1	SW8270C	06/24/13 20:16	PL	108-60-1	1
Chrysene	44	ug/L	1	SW8270C	06/24/13 20:16	PL	218-01-9	1
2,4-Dichlorophenol	41	ug/L	1	SW8270C	06/24/13 20:16	PL	120-83-2	1
2,4-Dimethylphenol	44	ug/L	1	SW8270C	06/24/13 20:16	PL	105-67-9	1
2,4-Dinitrophenol	39	ug/L	1	SW8270C	06/24/13 20:16	PL	51-28-5	1
2,4-Dinitrotoluene	46	ug/L	1	SW8270C	06/24/13 20:16	PL	121-14-2	1
2,6-Dinitrotoluene	48	ug/L	1	SW8270C	06/24/13 20:16	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	41	ug/L	1	SW8270C	06/24/13 20:16	PL	534-52-1	1
Dibenzo(ah)anthracene	50	ug/L	2	SW8270C	06/24/13 20:16	PL	53-70-3	1
Dibenzofuran	41	ug/L	1	SW8270C	06/24/13 20:16	PL	132-64-9	1
Diethyl phthalate	44	ug/L	2	SW8270C	06/24/13 20:16	PL	84-66-2	1
Dimethyl phthalate	44	ug/L	1	SW8270C	06/24/13 20:16	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	45	ug/L	1	SW8270C	06/24/13 20:16	PL	117-81-7	1B
Fluoranthene	44	ug/L	1	SW8270C	06/24/13 20:16	PL	206-44-0	1
Fluorene	42	ug/L	1	SW8270C	06/24/13 20:16	PL	86-73-7	1
Hexachlorobutadiene	35	ug/L	1	SW8270C	06/24/13 20:16	PL	87-68-3	1
Hexachlorocyclopentadiene	38	ug/L	1	SW8270C	06/24/13 20:16	PL	77-47-4	1
Hexachloroethane	34	ug/L	1	SW8270C	06/24/13 20:16	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	46	ug/L	1	SW8270C	06/24/13 20:16	PL	193-39-5	1
Isophorone	43	ug/L	1	SW8270C	06/24/13 20:16	PL	78-59-1	1
2-Methylnaphthalene	39	ug/L	1	SW8270C	06/24/13 20:16	PL	91-57-6	1
2-Methylphenol	35	ug/L	1	SW8270C	06/24/13 20:16	PL	95-48-7	1
3-, 4-Methylphenol	67	ug/L	1	SW8270C	06/24/13 20:16	PL	3/4-Cresol	1
2-Nitroaniline	43	ug/L	1	SW8270C	06/24/13 20:16	PL	88-74-4	1
2-Nitrophenol	38	ug/L	1	SW8270C	06/24/13 20:16	PL	88-75-5	1
3-Nitroaniline	32	ug/L	1	SW8270C	06/24/13 20:16	PL	99-09-2	1
4-Nitroaniline	39	ug/L	1	SW8270C	06/24/13 20:16	PL	100-01-6	1
4-Nitrophenol	32	ug/L	1	SW8270C	06/24/13 20:16	PL	100-02-7	1
N-Nitrosodi-n-propylamine	39	ug/L	1	SW8270C	06/24/13 20:16	PL	621-64-7	1
N-Nitrosodiphenylamine	44	ug/L	1	SW8270C	06/24/13 20:16	PL	86-30-6	1
Naphthalene	37	ug/L	1	SW8270C	06/24/13 20:16	PL	91-20-3	1
Nitrobenzene	38	ug/L	1	SW8270C	06/24/13 20:16	PL	98-95-3	1
di-n-Octyl phthalate	39	ug/L	1	SW8270C	06/24/13 20:16	PL	117-84-0	1
Pentachlorophenol	44	ug/L	1	SW8270C	06/24/13 20:16	PL	87-86-5	1
Phenanthrene	48	ug/L	1	SW8270C	06/24/13 20:16	PL	85-01-8	1
Phenol	22	ug/L	1	SW8270C	06/24/13 20:16	PL	108-95-2	1
Pyrene	41	ug/L	1	SW8270C	06/24/13 20:16	PL	129-00-0	1
2,4,5-Trichlorophenol	45	ug/L	1	SW8270C	06/24/13 20:16	PL	95-95-4	1

1-Sample spiked at 51 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S56844.04 (continued)
Sample Tag: P6-SB-37 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	43	ug/L	1	SW8270C	06/24/13 20:16	PL	88-06-2	1
Hexachlorobenzene	42	ug/L	1	SW8270C	06/24/13 20:16	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	55	ug/L	5	SW8260B - SIM	06/21/13 22:13	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	45	ug/L	1	SW8260B	06/22/13 15:50	WAT	76-13-1	2
Acetone	64	ug/L	10	SW8260B	06/22/13 15:50	WAT	67-64-1	2
Carbon disulfide	40	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-15-0	2
Methyl Acetate	71	ug/L	10	SW8260B	06/22/13 15:50	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	65	ug/L	1	SW8260B	06/22/13 15:50	WAT	1634-04-4	2
2-Butanone (MEK)	78	ug/L	10	SW8260B	06/22/13 15:50	WAT	78-93-3	2
Dichlorodifluoromethane	36	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-71-8	2
Chloromethane	49	ug/L	1	SW8260B	06/22/13 15:50	WAT	74-87-3	2
Vinyl chloride	50	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-01-4	2
Bromomethane	46	ug/L	1	SW8260B	06/22/13 15:50	WAT	74-83-9	2
Chloroethane	51	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-00-3	2
Trichlorofluoromethane	44	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-69-4	2
1,1-Dichloroethene	49	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-35-4	2
Methylene chloride	46	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-09-2	2
trans-1,2-Dichloroethene	52	ug/L	1	SW8260B	06/22/13 15:50	WAT	156-60-5	2
1,1-Dichloroethane	52	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-34-3	2
cis-1,2-Dichloroethene	50	ug/L	1	SW8260B	06/22/13 15:50	WAT	156-59-2	2
Chloroform	47	ug/L	1	SW8260B	06/22/13 15:50	WAT	67-66-3	2
1,1,1-Trichloroethane	46	ug/L	1	SW8260B	06/22/13 15:50	WAT	71-55-6	2
Cyclohexane	52	ug/L	1	SW8260B	06/22/13 15:50	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	84	ug/L	10	SW8260B	06/22/13 15:50	WAT	108-10-1	2
2-Hexanone	93	ug/L	10	SW8260B	06/22/13 15:50	WAT	591-78-6	2
Carbon tetrachloride	46	ug/L	1	SW8260B	06/22/13 15:50	WAT	56-23-5	2
Benzene	49	ug/L	1	SW8260B	06/22/13 15:50	WAT	71-43-2	2
1,2-Dichloroethane	53	ug/L	1	SW8260B	06/22/13 15:50	WAT	107-06-2	2
Trichloroethene	48	ug/L	1	SW8260B	06/22/13 15:50	WAT	79-01-6	2
1,2-Dichloropropane	53	ug/L	1	SW8260B	06/22/13 15:50	WAT	78-87-5	2
Bromodichloromethane	50	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-27-4	2
Methyl cyclohexane	53	ug/L	1	SW8260B	06/22/13 15:50	WAT	108-87-2	2
cis-1,3-Dichloropropene	46	ug/L	1	SW8260B	06/22/13 15:50	WAT	10061-01-5	2
Toluene	48	ug/L	1	SW8260B	06/22/13 15:50	WAT	108-88-3	2
trans-1,3-Dichloropropene	48	ug/L	1	SW8260B	06/22/13 15:50	WAT	10061-02-6	2
1,1,2-Trichloroethane	53	ug/L	1	SW8260B	06/22/13 15:50	WAT	79-00-5	2
Tetrachloroethene	47	ug/L	1	SW8260B	06/22/13 15:50	WAT	127-18-4	2
Dibromochloromethane	55	ug/L	1	SW8260B	06/22/13 15:50	WAT	124-48-1	2
Chlorobenzene	53	ug/L	1	SW8260B	06/22/13 15:50	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	66	ug/L	1	SW8260B	06/22/13 15:50	WAT	79-34-5	2
Ethylbenzene	54	ug/L	1	SW8260B	06/22/13 15:50	WAT	100-41-4	2
p,m-Xylene	110	ug/L	2	SW8260B	06/22/13 15:50	WAT		2
o-Xylene	54	ug/L	1	SW8260B	06/22/13 15:50	WAT	95-47-6	2

1-Sample spiked at 51 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56844.04 (continued)
Sample Tag: P6-SB-37 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	50	ug/L	1	SW8260B	06/22/13 15:50	WAT	100-42-5	1
Isopropylbenzene	54	ug/L	1	SW8260B	06/22/13 15:50	WAT	98-82-8	1
Bromoform	64	ug/L	1	SW8260B	06/22/13 15:50	WAT	75-25-2	1
1,3-Dichlorobenzene	48	ug/L	1	SW8260B	06/22/13 15:50	WAT	541-73-1	1
1,4-Dichlorobenzene	48	ug/L	1	SW8260B	06/22/13 15:50	WAT	106-46-7	1
1,2-Dichlorobenzene	47	ug/L	1	SW8260B	06/22/13 15:50	WAT	95-50-1	1
1,2,4-Trichlorobenzene	49	ug/L	1	SW8260B	06/22/13 15:50	WAT	120-82-1	1
1,2-Dibromoethane	62	ug/L	1	SW8260B	06/22/13 15:50	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	74	ug/L	1	SW8260B	06/22/13 15:50	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S56844.05
Sample Tag: MW-02-03 (6)
Collected Date/Time: 06/11/2013 13:30
Matrix: Groundwater
COC Reference: 74284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/13/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	06/13/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 16:25	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 16:22	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 16:20	PER	7440-36-0	
Arsenic, Dissolved	0.011	mg/L	0.002	SW6020	06/27/13 16:22	PER	7440-38-2	
Arsenic	0.028	mg/L	0.002	SW6020	06/27/13 16:20	PER	7440-38-2	
Barium, Dissolved	1.21	mg/L	0.010	SW6020	06/27/13 16:22	PER	7440-39-3	
Barium	1.21	mg/L	0.010	SW6020	06/27/13 16:20	PER	7440-39-3	
Boron, Dissolved	0.11	mg/L	0.04	SW6020	06/27/13 16:22	PER	7440-42-8	
Boron	0.13	mg/L	0.04	SW6020	06/27/13 16:20	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/27/13 16:22	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 16:20	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/27/13 16:22	PER	7440-47-3	
Chromium	0.023	mg/L	0.010	SW6020	06/27/13 16:20	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/27/13 16:22	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 16:20	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 16:22	PER	7440-50-8	
Copper	0.006	mg/L	0.002	SW6020	06/27/13 16:20	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 16:22	PER	7439-92-1	
Lead	0.002	mg/L	0.002	SW6020	06/27/13 16:20	PER	7439-92-1	
Manganese, Dissolved	0.251	mg/L	0.010	SW6020	06/27/13 16:22	PER	7439-96-5	
Manganese	0.294	mg/L	0.010	SW6020	06/27/13 16:20	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/13/13 15:06	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/13/13 15:04	CCM	7439-97-6	
Nickel, Dissolved	0.215	mg/L	0.010	SW6020	06/27/13 16:22	PER	7440-02-0	
Nickel	0.186	mg/L	0.010	SW6020	06/27/13 16:20	PER	7440-02-0	
Selenium, Dissolved	0.016	mg/L	0.005	SW6020	06/27/13 16:22	PER	7782-49-2	
Selenium	0.016	mg/L	0.005	SW6020	06/27/13 16:20	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/27/13 16:22	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 16:20	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 16:22	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	06/27/13 16:20	PER	7440-62-2	
Zinc, Dissolved	0.016	mg/L	0.010	SW6020	06/27/13 16:22	PER	7440-66-6	
Zinc	0.039	mg/L	0.010	SW6020	06/27/13 16:20	PER	7440-66-6	

Lab Sample ID: S56844.05 (continued)
Sample Tag: MW-02-03 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	06/24/13 20:45	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	7005-72-3	
Caprolactam	1	ug/L	1	SW8270C	06/24/13 20:45	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/24/13 20:45	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/24/13 20:45	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/24/13 20:45	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S56844.05 (continued)
Sample Tag: MW-02-03 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/24/13 20:45	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	18	ug/L	5	SW8260B - SIM	06/17/13 23:11	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	76-13-1	
Acetone	14	ug/L	10	SW8260B	06/22/13 18:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/22/13 18:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/22/13 18:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	74-87-3	
Vinyl chloride	1	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/22/13 18:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/22/13 18:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-27-4	

Lab Sample ID: S56844.05 (continued)
Sample Tag: MW-02-03 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/22/13 18:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/22/13 18:31	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56844.06
Sample Tag: P6-SB-32
Collected Date/Time: 06/11/2013 16:14
Matrix: Groundwater
COC Reference: 74284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/13/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	06/13/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 16:48	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 16:31	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 16:29	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020	06/27/13 16:31	PER	7440-38-2	
Arsenic	0.010	mg/L	0.002	SW6020	06/27/13 16:29	PER	7440-38-2	
Barium, Dissolved	0.134	mg/L	0.010	SW6020	06/27/13 16:31	PER	7440-39-3	
Barium	0.144	mg/L	0.010	SW6020	06/27/13 16:29	PER	7440-39-3	
Boron, Dissolved	0.23	mg/L	0.04	SW6020	06/27/13 16:31	PER	7440-42-8	
Boron	0.24	mg/L	0.04	SW6020	06/27/13 16:29	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	06/27/13 16:31	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 16:29	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	06/27/13 16:31	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 16:29	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	06/27/13 16:31	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 16:29	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 16:31	PER	7440-50-8	
Copper	Not detected	mg/L	0.002	SW6020	06/27/13 16:29	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 16:31	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	06/27/13 16:29	PER	7439-92-1	
Manganese, Dissolved	0.214	mg/L	0.010	SW6020	06/27/13 16:31	PER	7439-96-5	
Manganese	0.227	mg/L	0.010	SW6020	06/27/13 16:29	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/13/13 15:10	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/13/13 15:08	CCM	7439-97-6	
Nickel, Dissolved	0.039	mg/L	0.010	SW6020	06/27/13 16:31	PER	7440-02-0	
Nickel	0.035	mg/L	0.010	SW6020	06/27/13 16:29	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	06/27/13 16:31	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	06/27/13 16:29	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	06/27/13 16:31	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 16:29	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	06/27/13 16:31	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	06/27/13 16:29	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	06/27/13 16:31	PER	7440-66-6	
Zinc	0.012	mg/L	0.010	SW6020	06/27/13 16:29	PER	7440-66-6	

Lab Sample ID: S56844.06 (continued)
Sample Tag: P6-SB-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/24/13 21:15	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	120-83-2	
2,4-Dimethylphenol	13	ug/L	1	SW8270C	06/24/13 21:15	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/24/13 21:15	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/24/13 21:15	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	91-57-6	
2-Methylphenol	1	ug/L	1	SW8270C	06/24/13 21:15	PL	95-48-7	
3-, 4-Methylphenol	10	ug/L	1	SW8270C	06/24/13 21:15	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	88-75-5	

Lab Sample ID: S56844.06 (continued)
Sample Tag: P6-SB-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	86-30-6	
Naphthalene	59	ug/L	1	SW8270C	06/24/13 21:15	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/24/13 21:15	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/17/13 23:33	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	76-13-1	Y
Acetone	Not detected	ug/L	200	SW8260B	06/25/13 19:06	WAT	67-64-1	Y
Carbon disulfide	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-15-0	Y
Methyl Acetate	Not detected	ug/L	200	SW8260B	06/25/13 19:06	WAT	79-20-9	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	1634-04-4	Y
2-Butanone (MEK)	Not detected	ug/L	200	SW8260B	06/25/13 19:06	WAT	78-93-3	Y
Dichlorodifluoromethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-71-8	Y
Chloromethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	74-87-3	Y
Vinyl chloride	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-01-4	Y
Bromomethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	74-83-9	Y
Chloroethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-00-3	Y
Trichlorofluoromethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-69-4	Y
1,1-Dichloroethene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-35-4	Y
Methylene chloride	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	156-60-5	Y
1,1-Dichloroethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	156-59-2	Y
Chloroform	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	67-66-3	Y
1,1,1-Trichloroethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	71-55-6	Y
Cyclohexane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	110-82-7	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	200	SW8260B	06/25/13 19:06	WAT	108-10-1	Y
2-Hexanone	Not detected	ug/L	200	SW8260B	06/25/13 19:06	WAT	591-78-6	Y
Carbon tetrachloride	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	56-23-5	Y
Benzene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	71-43-2	Y
1,2-Dichloroethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	107-06-2	Y
Trichloroethene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	79-01-6	Y
1,2-Dichloropropane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	78-87-5	Y
Bromodichloromethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-27-4	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S56844.06 (continued)
Sample Tag: P6-SB-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	108-87-2	Y
cis-1,3-Dichloropropene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	10061-01-5	Y
Toluene	100	ug/L	20	SW8260B	06/25/13 19:06	WAT	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	79-00-5	Y
Tetrachloroethene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	127-18-4	Y
Dibromochloromethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	124-48-1	Y
Chlorobenzene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	108-90-7	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	79-34-5	Y
Ethylbenzene	340	ug/L	20	SW8260B	06/25/13 19:06	WAT	100-41-4	Y
p,m-Xylene	1,540	ug/L	40	SW8260B	06/25/13 19:06	WAT		Y
o-Xylene	620	ug/L	20	SW8260B	06/25/13 19:06	WAT	95-47-6	Y
Styrene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	100-42-5	Y
Isopropylbenzene	70	ug/L	20	SW8260B	06/25/13 19:06	WAT	98-82-8	Y
Bromoform	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	75-25-2	Y
1,3-Dichlorobenzene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	541-73-1	Y
1,4-Dichlorobenzene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	106-46-7	Y
1,2-Dichlorobenzene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	95-50-1	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	120-82-1	Y
1,2-Dibromoethane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	106-93-4	Y
1,2-Dibromo-3-chloropropane	Not detected	ug/L	20	SW8260B	06/25/13 19:06	WAT	96-12-8	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S56844.07
Sample Tag: EB-14
Collected Date/Time: 06/11/2013 16:59
Matrix: Liquid
COC Reference: 74284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/14/13 21:39	EMR		
Mercury Digestion	Completed			SW7471A	06/13/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/27/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/27/13 15:35	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/27/13 15:35	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/27/13 15:35	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/27/13 15:35	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/27/13 15:35	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/27/13 15:35	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/27/13 15:35	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/27/13 15:35	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/27/13 15:35	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/27/13 15:35	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/13/13 15:12	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/27/13 15:35	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/27/13 15:35	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/27/13 15:35	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/27/13 15:35	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/27/13 15:35	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	91-58-7	

Lab Sample ID: S56844.07 (continued)
Sample Tag: EB-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/24/13 21:44	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/24/13 21:44	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/24/13 21:44	PL	118-74-1	

Lab Sample ID: S56844.07 (continued)
Sample Tag: EB-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/22/13 18:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/22/13 18:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/22/13 18:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/22/13 18:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/22/13 18:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/22/13 18:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/22/13 18:11	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74284

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006401.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs TCL	SVOCs TCL	PCBs	Metals (w/Hg) TAL	1,4-dioxane only	Dissolved Methane
568440.01	6/11/13	0800	TRIP BLANK	L	1		1						X					
.02	6/11/13	1130	PG-SB-37	GW	6	2	3	1					X	X		X	X	
.03	6/11/13	1130	PG-SB-37 MS	GW	6	2	3	1					X	X		X	X	
.04	6/11/13	1130	PG-SB-37 MSD	GW	6	2	3	1					X	X		X	X	
.05	6/11/13	1330	MW-02-03(6)	GW	7	2	3	2					X	X		X	X	X
.06	6/11/13	1614	~~PG-SB-32~~ PG-SB-32	GW	7	2	3	2					X	X		X	X	X
.07	6/11/13	1659	EB-14	W	6	2	3	1					X	X		X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 6/11/13	TIME 1900
RECEIVED BY: SIGNATURE/ORGANIZATION: Ron Stronge		DATE 6/11/13	TIME 1900
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6-12-13	TIME 930

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 6/12/13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Calcutta Fawcett		DATE 6/12/13	TIME 1000
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.7
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56569.01(01)
Generated on 06/10/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56569.01-S56569.07
Project: Lansing Plant Project# B0064480.2013
Collected Date: 05/22/2013 - 05/23/2013
Submitted Date/Time: 05/24/2013 09:30
Sampled by: Robert Prigge
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56569.01	MW-04-03 (3)	Groundwater	05/22/2013 11:05
S56569.02	MW-88-1	Groundwater	05/22/2013 14:50
S56569.03	MW-91-4	Groundwater	05/22/2013 17:44
S56569.04	MW-04-04 (3)	Groundwater	05/23/2013 10:55
S56569.05	MW-02-01 (3)	Groundwater	05/23/2013 15:05
S56569.06	Dup-02	Groundwater	05/23/2013 00:01
S56569.07	Trip Blank	Water	05/23/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56569.01
Sample Tag: MW-04-03 (3)
Collected Date/Time: 05/22/2013 11:05
Matrix: Groundwater
COC Reference: 74267

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:28	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 15:28	PER	7440-38-2	
Barium	0.187	mg/L	0.010	SW6020	06/10/13 15:28	PER	7440-39-3	
Boron	0.44	mg/L	0.04	SW6020	06/10/13 15:28	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:28	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:28	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:28	PER	7440-48-4	
Copper	0.009	mg/L	0.002	SW6020	06/10/13 15:28	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:28	PER	7439-92-1	
Manganese	0.168	mg/L	0.010	SW6020	06/10/13 15:28	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:14	CCM	7439-97-6	
Nickel	0.013	mg/L	0.010	SW6020	06/10/13 15:28	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 15:28	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:28	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:28	PER	7440-62-2	
Zinc	0.016	mg/L	0.010	SW6020	06/10/13 15:28	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	91-58-7	

Lab Sample ID: S56569.01 (continued)
Sample Tag: MW-04-03 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 15:03	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 15:03	PL	118-74-1	

Lab Sample ID: S56569.01 (continued)
Sample Tag: MW-04-03 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 18:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 20:47	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 20:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 20:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	74-87-3	
Vinyl chloride	20	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 20:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 20:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 20:47	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	120-82-1	

Lab Sample ID: S56569.01 (continued)
Sample Tag: MW-04-03 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 20:47	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56569.02
Sample Tag: MW-88-1
Collected Date/Time: 05/22/2013 14:50
Matrix: Groundwater
COC Reference: 74267

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:30	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020	06/10/13 15:30	PER	7440-38-2	
Barium	0.092	mg/L	0.010	SW6020	06/10/13 15:30	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020	06/10/13 15:30	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:30	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:30	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:30	PER	7440-48-4	
Copper	0.014	mg/L	0.002	SW6020	06/10/13 15:30	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:30	PER	7439-92-1	
Manganese	0.027	mg/L	0.010	SW6020	06/10/13 15:30	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:00	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 15:30	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 15:30	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:30	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:30	PER	7440-62-2	
Zinc	0.012	mg/L	0.010	SW6020	06/10/13 15:30	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	91-58-7	

Lab Sample ID: S56569.02 (continued)
Sample Tag: MW-88-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 15:36	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 15:36	PL	118-74-1	

Lab Sample ID: S56569.02 (continued)
Sample Tag: MW-88-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 19:11	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 21:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 21:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 21:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 21:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 21:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 21:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	120-82-1	

Lab Sample ID: S56569.02 (continued)
Sample Tag: MW-88-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 21:07	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56569.03
Sample Tag: MW-91-4
Collected Date/Time: 05/22/2013 17:44
Matrix: Groundwater
COC Reference: 74267

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:32	PER	7440-36-0	
Arsenic	0.012	mg/L	0.002	SW6020	06/10/13 15:32	PER	7440-38-2	
Barium	0.097	mg/L	0.010	SW6020	06/10/13 15:32	PER	7440-39-3	
Boron	0.35	mg/L	0.04	SW6020	06/10/13 15:32	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:32	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:32	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:32	PER	7440-48-4	
Copper	0.006	mg/L	0.002	SW6020	06/10/13 15:32	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:32	PER	7439-92-1	
Manganese	0.360	mg/L	0.010	SW6020	06/10/13 15:32	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:02	CCM	7439-97-6	
Nickel	0.011	mg/L	0.010	SW6020	06/10/13 15:32	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 15:32	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:32	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:32	PER	7440-62-2	
Zinc	0.013	mg/L	0.010	SW6020	06/10/13 15:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	91-58-7	

Lab Sample ID: S56569.03 (continued)
Sample Tag: MW-91-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 16:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/04/13 16:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 16:09	PL	118-74-1	

Lab Sample ID: S56569.03 (continued)
Sample Tag: MW-91-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 19:33	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 21:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 21:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 21:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	74-87-3	
Vinyl chloride	17	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-34-3	
cis-1,2-Dichloroethene	23	ug/L	1	SW8260B	05/29/13 21:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 21:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 21:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 21:27	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	120-82-1	

Lab Sample ID: S56569.03 (continued)
Sample Tag: MW-91-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 21:27	WAT	96-12-8	

Lab Sample ID: S56569.04
Sample Tag: MW-04-04 (3)
Collected Date/Time: 05/23/2013 10:55
Matrix: Groundwater
COC Reference: 74267

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:34	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020	06/10/13 15:34	PER	7440-38-2	
Barium	0.091	mg/L	0.010	SW6020	06/10/13 15:34	PER	7440-39-3	
Boron	0.32	mg/L	0.04	SW6020	06/10/13 15:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:34	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:34	PER	7440-48-4	
Copper	0.014	mg/L	0.002	SW6020	06/10/13 15:34	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:34	PER	7439-92-1	
Manganese	0.447	mg/L	0.010	SW6020	06/10/13 15:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:04	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 15:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 15:34	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:34	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:34	PER	7440-62-2	
Zinc	0.010	mg/L	0.010	SW6020	06/10/13 15:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	91-58-7	

Lab Sample ID: S56569.04 (continued)
Sample Tag: MW-04-04 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 16:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/04/13 16:43	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 16:43	PL	118-74-1	

Lab Sample ID: S56569.04 (continued)
Sample Tag: MW-04-04 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 19:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 21:47	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 21:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 21:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	74-87-3	
Vinyl chloride	6	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-34-3	
cis-1,2-Dichloroethene	5	ug/L	1	SW8260B	05/29/13 21:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 21:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 21:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 21:47	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	120-82-1	

Lab Sample ID: S56569.04 (continued)
Sample Tag: MW-04-04 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 21:47	WAT	96-12-8	

Lab Sample ID: S56569.05
Sample Tag: MW-02-01 (3)
Collected Date/Time: 05/23/2013 15:05
Matrix: Groundwater
COC Reference: 74267

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:36	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020	06/10/13 15:36	PER	7440-38-2	
Barium	0.080	mg/L	0.010	SW6020	06/10/13 15:36	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020	06/10/13 15:36	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:36	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:36	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:36	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	06/10/13 15:36	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:36	PER	7439-92-1	
Manganese	0.049	mg/L	0.010	SW6020	06/10/13 15:36	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:06	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 15:36	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 15:36	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:36	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:36	PER	7440-62-2	
Zinc	0.027	mg/L	0.010	SW6020	06/10/13 15:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	91-58-7	

Lab Sample ID: S56569.05 (continued)
Sample Tag: MW-02-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 17:17	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	06/04/13 17:17	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 17:17	PL	118-74-1	

Lab Sample ID: S56569.05 (continued)
Sample Tag: MW-02-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 20:17	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 22:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 22:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 22:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 22:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 22:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 22:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	120-82-1	

Lab Sample ID: S56569.05 (continued)
Sample Tag: MW-02-01 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 22:07	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56569.06
Sample Tag: Dup-02
Collected Date/Time: 05/23/2013 00:01
Matrix: Groundwater
COC Reference: 74267

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:38	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020	06/10/13 15:38	PER	7440-38-2	
Barium	0.079	mg/L	0.010	SW6020	06/10/13 15:38	PER	7440-39-3	
Boron	0.14	mg/L	0.04	SW6020	06/10/13 15:38	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:38	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:38	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:38	PER	7440-48-4	
Copper	0.007	mg/L	0.002	SW6020	06/10/13 15:38	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:38	PER	7439-92-1	
Manganese	0.049	mg/L	0.010	SW6020	06/10/13 15:38	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 16:08	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 15:38	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 15:38	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:38	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:38	PER	7440-62-2	
Zinc	0.013	mg/L	0.010	SW6020	06/10/13 15:38	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	91-58-7	

Lab Sample ID: S56569.06 (continued)
Sample Tag: Dup-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 17:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 17:50	PL	118-74-1	

Lab Sample ID: S56569.06 (continued)
Sample Tag: Dup-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 20:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 22:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 22:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 22:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 22:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 22:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 22:27	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	120-82-1	

Lab Sample ID: S56569.06 (continued)
Sample Tag: Dup-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 22:27	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56569.07
Sample Tag: Trip Blank
Collected Date/Time: 05/23/2013 00:01
Matrix: Water
COC Reference: 74267

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 17:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 17:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 17:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 17:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 17:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 17:46	WAT		

Lab Sample ID: S56569.07 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 17:46	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74267

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task#

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006443.0.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Briggs

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (wHg)	1,4 dioxane 8260 SIM
56569.01	05/22/13	11:05	MW-04-03 (3)	GW	6	X	X	X					3	2		1	3
.02	05/22/13	14:30	MW-88-1	GW	6	X	X	X					3	2		1	3
.03	05/22/13	17:44	MW-91-4	GW	6	X	X	X					3	2		1	3
.04	05/23/13	10:55	MW-04-04 (3)	GW	6	X	X	X					3	2		1	3
.05	05/23/13	15:05	MW-02-01 (3)	GW	6	X	X	X					3	2		1	3
.06	05/23/13	---	Dup-02	GW	6	X	X	X					3	2		1	3
.07	05/23	---	Trip Blank	W	2		X										

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Robert Briggs ARCADIS ☐ Sampler DATE 05/23/13 TIME 18:18
RECEIVED BY: SIGNATURE/ORGANIZATION: PM= DATE 05/23/13 TIME 18:18
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: JDW Merl DATE 5-24-13 TIME 900

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE 5/23/13 TIME 1930
RECEIVED BY: SIGNATURE/ORGANIZATION: PM STORAGE DATE 5/23/13 TIME 1900

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS Takasha Faust 5/24/13 900

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56568.01(01)
Generated on 06/10/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56568.01-S56568.03
Project: Lansing Plant Project# B0064479.2013.00603
Collected Date: 05/23/2013
Submitted Date/Time: 05/24/2013 09:30
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56568.01	Trip Blank	Groundwater	05/23/2013 08:00
S56568.02	MW-12-08	Groundwater	05/23/2013 13:13
S56568.03	MW-12-09	Groundwater	05/23/2013 17:38

Analytical Laboratory Report

Lab Sample ID: S56568.01
Sample Tag: Trip Blank
Collected Date/Time: 05/23/2013 08:00
Matrix: Groundwater
COC Reference: 74241

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 17:26	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 17:26	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 17:26	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 17:26	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 17:26	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 17:26	WAT		

Lab Sample ID: S56568.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 17:26	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56568.02
Sample Tag: MW-12-08
Collected Date/Time: 05/23/2013 13:13
Matrix: Groundwater
COC Reference: 74241

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:24	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 15:24	PER	7440-38-2	
Barium	0.254	mg/L	0.010	SW6020	06/10/13 15:24	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	06/10/13 15:24	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:24	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:24	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:24	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	06/10/13 15:24	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:24	PER	7439-92-1	
Manganese	0.499	mg/L	0.010	SW6020	06/10/13 15:24	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 15:56	CCM	7439-97-6	
Nickel	0.023	mg/L	0.010	SW6020	06/10/13 15:24	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020	06/10/13 15:24	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:24	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:24	PER	7440-62-2	
Zinc	0.012	mg/L	0.010	SW6020	06/10/13 15:24	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	91-58-7	

Lab Sample ID: S56568.02 (continued)
Sample Tag: MW-12-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 13:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 13:56	PL	118-74-1	

Lab Sample ID: S56568.02 (continued)
Sample Tag: MW-12-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 18:05	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 20:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 20:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 20:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 20:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 20:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 20:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	120-82-1	

Lab Sample ID: S56568.02 (continued)
Sample Tag: MW-12-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 20:07	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56568.03
Sample Tag: MW-12-09
Collected Date/Time: 05/23/2013 17:38
Matrix: Groundwater
COC Reference: 74241

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/29/13 21:55	EMR		
Mercury Digestion	Completed			SW7471A	05/28/13 11:45	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:26	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020	06/10/13 15:26	PER	7440-38-2	
Barium	0.060	mg/L	0.010	SW6020	06/10/13 15:26	PER	7440-39-3	
Boron	0.18	mg/L	0.04	SW6020	06/10/13 15:26	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:26	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:26	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:26	PER	7440-48-4	
Copper	0.006	mg/L	0.002	SW6020	06/10/13 15:26	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:26	PER	7439-92-1	
Manganese	0.722	mg/L	0.010	SW6020	06/10/13 15:26	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/28/13 15:58	CCM	7439-97-6	
Nickel	0.034	mg/L	0.010	SW6020	06/10/13 15:26	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 15:26	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:26	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:26	PER	7440-62-2	
Zinc	0.014	mg/L	0.010	SW6020	06/10/13 15:26	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	91-58-7	

Lab Sample ID: S56568.03 (continued)
Sample Tag: MW-12-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/04/13 14:29	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/04/13 14:29	PL	118-74-1	

Lab Sample ID: S56568.03 (continued)
Sample Tag: MW-12-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 18:27	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 20:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 20:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 20:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 20:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 20:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 20:27	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	120-82-1	

Lab Sample ID: S56568.03 (continued)
Sample Tag: MW-12-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 20:27	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74241

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task#00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006447.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Vilthaver

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1,4 dioxane (SIMS)
565681.01	5/23	8:00	Trip blank	GW	2		2						X				
.02	5/23	13:13	MW-12-08	GW	6	2	3	1					X	X		X	X
.03	5/23	17:38	MW-12-09	GW	6	2	3	1					X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: /PME ☒ Sampler	DATE: 5/23/13	TIME: 19:10	
RECEIVED BY: SIGNATURE/ORGANIZATION: PM storage	DATE: 5/23/13	TIME: 19:10	
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE: 5-24-13	TIME: 9CC	

RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE: 5-24-13	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust	DATE: 5-24-13	TIME: 930	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL: 4.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56549.01(01)
Generated on 06/10/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56549.01-S56549.06
Project: Lansing Plant 2 Project# B0064479.2013.00603
Collected Date: 05/22/2013
Submitted Date/Time: 05/23/2013 10:00
Sampled by: Alex Villhauer
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56549.01	Trip Blank	Groundwater	05/22/2013 08:50
S56549.02	MW-01 (2)	Groundwater	05/22/2013 10:20
S56549.03	MW-02 (2)	Groundwater	05/22/2013 13:09
S56549.04	EQ-2	Groundwater	05/22/2013 13:35
S56549.05	MW-03 (2)	Groundwater	05/22/2013 14:57
S56549.06	MW-12-17	Groundwater	05/22/2013 10:20

Analytical Laboratory Report

Lab Sample ID: S56549.01
Sample Tag: Trip Blank
Collected Date/Time: 05/22/2013 08:50
Matrix: Groundwater
COC Reference: 74254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 18:26	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 18:26	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 18:26	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 18:26	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 18:26	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 18:26	WAT		

Lab Sample ID: S56549.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 18:26	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56549.02
Sample Tag: MW-01 (2)
Collected Date/Time: 05/22/2013 10:20
Matrix: Groundwater
COC Reference: 74254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:20	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 14:20	PER	7440-38-2	
Barium	0.357	mg/L	0.010	SW6020	06/10/13 14:20	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	06/10/13 14:20	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:20	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:20	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:20	PER	7440-48-4	
Copper	0.007	mg/L	0.002	SW6020	06/10/13 14:20	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:20	PER	7439-92-1	
Manganese	0.129	mg/L	0.010	SW6020	06/10/13 14:20	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:50	CCM	7439-97-6	
Nickel	0.027	mg/L	0.010	SW6020	06/10/13 14:20	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:20	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:20	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:20	PER	7440-62-2	
Zinc	0.024	mg/L	0.010	SW6020	06/10/13 14:20	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	91-58-7	

Lab Sample ID: S56549.02 (continued)
Sample Tag: MW-01 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 17:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 17:47	PL	118-74-1	

Lab Sample ID: S56549.02 (continued)
Sample Tag: MW-01 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 16:15	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 18:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 18:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	8	ug/L	1	SW8260B	05/29/13 18:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 18:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 18:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 18:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 18:46	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	120-82-1	

Lab Sample ID: S56549.02 (continued)
Sample Tag: MW-01 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 18:46	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56549.03
Sample Tag: MW-02 (2)
Collected Date/Time: 05/22/2013 13:09
Matrix: Groundwater
COC Reference: 74254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:22	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 14:22	PER	7440-38-2	
Barium	0.125	mg/L	0.010	SW6020	06/10/13 14:22	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	06/10/13 14:22	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:22	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:22	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:22	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	06/10/13 14:22	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:22	PER	7439-92-1	
Manganese	0.042	mg/L	0.010	SW6020	06/10/13 14:22	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:52	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 14:22	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:22	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:22	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:22	PER	7440-62-2	
Zinc	0.018	mg/L	0.010	SW6020	06/10/13 14:22	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	05/30/13 18:21	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	85-68-7	

B-Compound also found in associated method blank

Lab Sample ID: S56549.03 (continued)
Sample Tag: MW-02 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 18:21	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 18:21	PL	118-74-1	

Lab Sample ID: S56549.03 (continued)
Sample Tag: MW-02 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 16:37	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 19:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 19:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 19:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 19:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 19:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 19:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	120-82-1	

Lab Sample ID: S56549.03 (continued)
Sample Tag: MW-02 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 19:07	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56549.04
Sample Tag: EQ-2
Collected Date/Time: 05/22/2013 13:35
Matrix: Groundwater
COC Reference: 74254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:24	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 14:24	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/10/13 14:24	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 14:24	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:24	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:24	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:24	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 14:24	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:24	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/10/13 14:24	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:54	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 14:24	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:24	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:24	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:24	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/10/13 14:24	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	91-58-7	

Lab Sample ID: S56549.04 (continued)
Sample Tag: EQ-2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 18:54	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 18:54	PL	118-74-1	

Lab Sample ID: S56549.04 (continued)
Sample Tag: EQ-2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 16:59	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 19:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 19:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 19:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 19:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 19:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 19:27	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	120-82-1	

Lab Sample ID: S56549.04 (continued)
Sample Tag: EQ-2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 19:27	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56549.05
Sample Tag: MW-03 (2)
Collected Date/Time: 05/22/2013 14:57
Matrix: Groundwater
COC Reference: 74254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:12	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	06/10/13 15:12	PER	7440-38-2	
Barium	0.374	mg/L	0.010	SW6020	06/10/13 15:12	PER	7440-39-3	
Boron	0.18	mg/L	0.04	SW6020	06/10/13 15:12	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:12	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:12	PER	7440-47-3	
Cobalt	0.010	mg/L	0.010	SW6020	06/10/13 15:12	PER	7440-48-4	
Copper	0.018	mg/L	0.002	SW6020	06/10/13 15:12	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:12	PER	7439-92-1	
Manganese	1.35	mg/L	0.010	SW6020	06/10/13 15:12	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:56	CCM	7439-97-6	
Nickel	0.053	mg/L	0.010	SW6020	06/10/13 15:12	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020	06/10/13 15:12	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:12	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:12	PER	7440-62-2	
Zinc	0.020	mg/L	0.010	SW6020	06/10/13 15:12	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	91-58-7	

Lab Sample ID: S56549.05 (continued)
Sample Tag: MW-03 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 19:28	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	132-64-9	
Diethyl phthalate	1	ug/L	1	SW8270C	05/30/13 19:28	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 19:28	PL	118-74-1	

Lab Sample ID: S56549.05 (continued)
Sample Tag: MW-03 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 17:21	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 19:47	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 19:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 19:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 19:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 19:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 19:47	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	120-82-1	

Lab Sample ID: S56549.05 (continued)
Sample Tag: MW-03 (2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 19:47	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56549.06
Sample Tag: MW-12-17
Collected Date/Time: 05/22/2013 10:20
Matrix: Groundwater
COC Reference: 74254

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 15:14	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	06/10/13 15:14	PER	7440-38-2	
Barium	0.052	mg/L	0.010	SW6020	06/10/13 15:14	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	06/10/13 15:14	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 15:14	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 15:14	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 15:14	PER	7440-48-4	
Copper	0.021	mg/L	0.002	SW6020	06/10/13 15:14	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 15:14	PER	7439-92-1	
Manganese	0.138	mg/L	0.010	SW6020	06/10/13 15:14	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 16:02	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 15:14	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 15:14	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 15:14	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 15:14	PER	7440-62-2	
Zinc	0.014	mg/L	0.010	SW6020	06/10/13 15:14	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	91-58-7	

Lab Sample ID: S56549.06 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 20:01	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	05/30/13 20:01	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 20:01	PL	118-74-1	

Lab Sample ID: S56549.06 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 17:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 17:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 17:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 17:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 17:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 17:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 17:06	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	120-82-1	

Lab Sample ID: S56549.06 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 17:06	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74254

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	PO
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	Task# 00603

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 2 Project#: B006447.2013.0003

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villeneuve/

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	PCBs	TAL Metals (w/Hg)	1,4 dioxane (SIM)
56549.01	5/22/13	8:50	Trip Blank	GW	3		3						X				
.02	5/22	10:20	MW-01 (2)	GW	6	2	3	1					X	X	X	X	X
.03	5/22	13:09	MW-02 (2)	GW	6	2	3	1					X	X	X	X	X
.04	5/22	13:35	EQ-2	GW	6	2	3	1					X	X	X	X	X
.05	5/22	14:57	MW-03 (2)	GW	6	2	3	1					X	X	X	X	X
.06	5/22	18:20	MW-12-17	GW	6	2	3	1					X	X	X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	/PME ☒ Sampler	DATE 5/22/13	TIME 18:23
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage	DATE 5/22/13	TIME 18:23
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	MED	DATE 5/23/13	TIME 830

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 5.23.13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Talbot Fcmt	DATE 5-23-13	TIME 1000

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.7
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56548.01(01)
Generated on 06/10/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56548.01-S56548.04
Project: Lansing Plant 6 Project# B0064481.2013.00603
Collected Date: 05/22/2013
Submitted Date/Time: 05/23/2013 10:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56548.01	MW-04-05(6)	Groundwater	05/22/2013 16:46
S56548.02	MW-12-10	Groundwater	05/22/2013 14:22
S56548.03	MW-12-03	Groundwater	05/22/2013 10:50
S56548.04	TRIP BLANK	Liquid	05/22/2013 09:00

Analytical Laboratory Report

Lab Sample ID: S56548.01
Sample Tag: MW-04-05(6)
Collected Date/Time: 05/22/2013 16:46
Matrix: Groundwater
COC Reference: 74260

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:30	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 14:30	PER	7440-38-2	
Barium	0.934	mg/L	0.010	SW6020	06/10/13 14:30	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020	06/10/13 14:30	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:30	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:30	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:30	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 14:30	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:30	PER	7439-92-1	
Manganese	0.438	mg/L	0.010	SW6020	06/10/13 14:30	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:58	CCM	7439-97-6	
Nickel	0.020	mg/L	0.010	SW6020	06/10/13 14:30	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:30	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:30	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:30	PER	7440-62-2	
Zinc	0.011	mg/L	0.010	SW6020	06/10/13 14:30	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	05/30/13 16:07	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	85-68-7	

B-Compound also found in associated method blank

Lab Sample ID: S56548.01 (continued)
Sample Tag: MW-04-05(6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 16:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 16:07	PL	118-74-1	

Lab Sample ID: S56548.01 (continued)
Sample Tag: MW-04-05(6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 15:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 15:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 15:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 15:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	74-87-3	
Vinyl chloride	1	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 15:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 15:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 15:46	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	120-82-1	

Lab Sample ID: S56548.01 (continued)
Sample Tag: MW-04-05(6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 15:46	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56548.02
Sample Tag: MW-12-10
Collected Date/Time: 05/22/2013 14:22
Matrix: Groundwater
COC Reference: 74260

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:32	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 14:32	PER	7440-38-2	
Barium	0.066	mg/L	0.010	SW6020	06/10/13 14:32	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	06/10/13 14:32	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:32	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:32	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:32	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 14:32	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:32	PER	7439-92-1	
Manganese	0.273	mg/L	0.010	SW6020	06/10/13 14:32	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:46	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 14:32	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:32	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:32	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:32	PER	7440-62-2	
Zinc	0.010	mg/L	0.010	SW6020	06/10/13 14:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	91-58-7	

Lab Sample ID: S56548.02 (continued)
Sample Tag: MW-12-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 16:40	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	05/30/13 16:40	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 16:40	PL	118-74-1	

Lab Sample ID: S56548.02 (continued)
Sample Tag: MW-12-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 15:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 16:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 16:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 16:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 16:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 16:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 16:06	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	120-82-1	

Lab Sample ID: S56548.02 (continued)
Sample Tag: MW-12-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 16:06	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56548.03
Sample Tag: MW-12-03
Collected Date/Time: 05/22/2013 10:50
Matrix: Groundwater
COC Reference: 74260

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 12:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:34	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 14:34	PER	7440-38-2	
Barium	0.211	mg/L	0.010	SW6020	06/10/13 14:34	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 14:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:34	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:34	PER	7440-48-4	
Copper	0.026	mg/L	0.002	SW6020	06/10/13 14:34	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:34	PER	7439-92-1	
Manganese	0.689	mg/L	0.010	SW6020	06/10/13 14:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:48	CCM	7439-97-6	
Nickel	0.015	mg/L	0.010	SW6020	06/10/13 14:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:34	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:34	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:34	PER	7440-62-2	
Zinc	0.017	mg/L	0.010	SW6020	06/10/13 14:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	91-58-7	

Lab Sample ID: S56548.03 (continued)
Sample Tag: MW-12-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 17:14	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 17:14	PL	118-74-1	

Lab Sample ID: S56548.03 (continued)
Sample Tag: MW-12-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 15:53	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 16:26	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 16:26	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 16:26	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 16:26	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 16:26	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 16:26	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	120-82-1	

Lab Sample ID: S56548.03 (continued)
Sample Tag: MW-12-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 16:26	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56548.04
Sample Tag: TRIP BLANK
Collected Date/Time: 05/22/2013 09:00
Matrix: Liquid
COC Reference: 74260

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/30/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/29/13 16:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/29/13 16:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/29/13 16:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/29/13 16:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/29/13 16:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/29/13 16:46	WAT		

Lab Sample ID: S56548.04 (continued)
Sample Tag: TRIP BLANK

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/29/13 16:46	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
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C.O.C. PAGE # 1 OF 1

74260

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE STELTER

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs TCL	SVOCs TCL	PCBs	TAL Metals (w/Hg)	1,4-dioxane (SIMS)
56548.01	5/22/13	1646	MW-04-05 (6)	GW	6	2	3	1					X	X		X	X
.02	5/22/13	1422	MW-12-10	GW	6	2	3	1					X	X		X	X
.03	5/22/13	1050	MW-12-03	GW	6	2	3	1					X	X		X	X
.04	5/22/13	0900	TRIP BLANK	L			3						X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION		☒ Sampler	DATE	TIME
			5/22/13	1830
RECEIVED BY: SIGNATURE/ORGANIZATION	PM Storage		5/22/13	1830
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Mo		5-23-13	850

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Mot	5-23-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Faust	DATE 5-23-13	TIME 1000
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.7
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56547.01(01)
Generated on 06/10/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56547.01-S56547.04
Project: Lansing Plant Project# B0064480.2013.00603
Collected Date: 05/21/2013
Submitted Date/Time: 05/23/2013 10:00
Sampled by: Joe Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56547.01	Trip Blank	Liquid	05/21/2013 00:01
S56547.02	MW-04-02(3)	Liquid	05/21/2013 16:15
S56547.03	DUP-01	Liquid	05/21/2013 00:01
S56547.04	EB-1	Liquid	05/21/2013 17:50

Analytical Laboratory Report

Lab Sample ID: S56547.01
Sample Tag: Trip Blank
Collected Date/Time: 05/21/2013 00:01
Matrix: Liquid
COC Reference: 74269

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/24/13 10:40	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/23/13 16:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/23/13 16:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/23/13 16:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/23/13 16:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/23/13 16:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/23/13 16:01	WAT		

Lab Sample ID: S56547.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/23/13 16:01	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56547.02
Sample Tag: MW-04-02(3)
Collected Date/Time: 05/21/2013 16:15
Matrix: Liquid
COC Reference: 74269

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:15	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020	06/10/13 14:15	PER	7440-38-2	
Barium	0.108	mg/L	0.010	SW6020	06/10/13 14:15	PER	7440-39-3	
Boron	0.31	mg/L	0.04	SW6020	06/10/13 14:15	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:15	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:15	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:15	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 14:15	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:15	PER	7439-92-1	
Manganese	0.326	mg/L	0.010	SW6020	06/10/13 14:15	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:27	CCM	7439-97-6	
Nickel	0.013	mg/L	0.010	SW6020	06/10/13 14:15	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:15	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:15	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:15	PER	7440-62-2	
Zinc	0.020	mg/L	0.010	SW6020	06/10/13 14:15	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	91-58-7	

Lab Sample ID: S56547.02 (continued)
Sample Tag: MW-04-02(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 14:26	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	05/30/13 14:26	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 14:26	PL	118-74-1	

Lab Sample ID: S56547.02 (continued)
Sample Tag: MW-04-02(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 14:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/23/13 16:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/23/13 16:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/23/13 16:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	74-87-3	
Vinyl chloride	15	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-34-3	
cis-1,2-Dichloroethene	15	ug/L	1	SW8260B	05/23/13 16:21	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/23/13 16:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/23/13 16:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/23/13 16:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	120-82-1	

Lab Sample ID: S56547.02 (continued)
Sample Tag: MW-04-02(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/23/13 16:21	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56547.03
Sample Tag: DUP-01
Collected Date/Time: 05/21/2013 00:01
Matrix: Liquid
COC Reference: 74269

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:17	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020	06/10/13 14:17	PER	7440-38-2	
Barium	0.104	mg/L	0.010	SW6020	06/10/13 14:17	PER	7440-39-3	
Boron	0.33	mg/L	0.04	SW6020	06/10/13 14:17	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:17	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:17	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:17	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	06/10/13 14:17	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:17	PER	7439-92-1	
Manganese	0.336	mg/L	0.010	SW6020	06/10/13 14:17	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:30	CCM	7439-97-6	
Nickel	0.012	mg/L	0.010	SW6020	06/10/13 14:17	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:17	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:17	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:17	PER	7440-62-2	
Zinc	0.023	mg/L	0.010	SW6020	06/10/13 14:17	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	91-58-7	

Lab Sample ID: S56547.03 (continued)
Sample Tag: DUP-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 15:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 15:00	PL	118-74-1	

Lab Sample ID: S56547.03 (continued)
Sample Tag: DUP-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 14:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/23/13 16:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/23/13 16:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/23/13 16:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	74-87-3	
Vinyl chloride	15	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-34-3	
cis-1,2-Dichloroethene	15	ug/L	1	SW8260B	05/23/13 16:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/23/13 16:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/23/13 16:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/23/13 16:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	120-82-1	

Lab Sample ID: S56547.03 (continued)
Sample Tag: DUP-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/23/13 16:41	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56547.04
Sample Tag: EB-1
Collected Date/Time: 05/21/2013 17:50
Matrix: Liquid
COC Reference: 74269

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/28/13 21:35	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/24/13 10:59	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:19	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	06/10/13 14:19	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	06/10/13 14:19	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 14:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:19	PER	7440-48-4	
Copper	0.030	mg/L	0.002	SW6020	06/10/13 14:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:19	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	06/10/13 14:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:32	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	06/10/13 14:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:19	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	06/10/13 14:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	91-58-7	

Lab Sample ID: S56547.04 (continued)
Sample Tag: EB-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/30/13 15:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/30/13 15:33	PL	118-74-1	

Lab Sample ID: S56547.04 (continued)
Sample Tag: EB-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/24/13 14:47	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/23/13 17:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/23/13 17:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/23/13 17:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/23/13 17:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/23/13 17:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/23/13 17:01	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	120-82-1	

Lab Sample ID: S56547.04 (continued)
Sample Tag: EB-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/23/13 17:01	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74269

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: | ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006448.0002.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joe Rumschlag

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs 8260 1,4-dioxane 8260SIM	SVOCs	PCBs	Metals (w/Hg)	VOCs 8260
56547.01	5/21/13	—	Trip Blank	L	2		1						X				X
.02	5/21/13	1615	MW-04-02 (3)	L	6	2	3	1					X	X		X	
.03	5/21/13	—	DUP-01	L	6	2	3	1					X	X		X	
.04	5/21/13	1750	EB-1	L	6	2	3	1					X	X		X	

RELINQUISHED BY: Joseph Rumschlag / ARCADIS (Sampler)	DATE 5/22/13	TIME 1751	RELINQUISHED BY: SIGNATURE/ORGANIZATION
RECEIVED BY: SIGNATURE/ORGANIZATION / PME	DATE 5/22/13	TIME 17:51	RECEIVED BY: SIGNATURE/ORGANIZATION Tabatha Faust
RELINQUISHED BY: SIGNATURE/ORGANIZATION / PME	DATE 5/22/13	TIME 18:24	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS
RECEIVED BY: SIGNATURE/ORGANIZATION PM Storage	DATE 5/22/13	TIME 18:24	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS

DATE 5-23-13 TIME 1000
NOTES: TEMP. ON ARRIVAL 4.7

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

5-23-13 830

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56527.01(01)
Generated on 06/10/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56527.01
Project: Lansing Plant Project# B0064480.2013
Collected Date: 05/21/2013
Submitted Date/Time: 05/21/2013 15:30
Sampled by: Robert Prigge
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56527.01	MW-02-04(3)	Groundwater	05/21/2013 12:50

Analytical Laboratory Report

Lab Sample ID: S56527.01
Sample Tag: MW-02-04(3)
Collected Date/Time: 05/21/2013 12:50
Matrix: Groundwater
COC Reference: 74268

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
1	125ml Plastic	HNO3	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
1	125ml Plastic	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	05/23/13 23:46	EMR		
Mercury Digestion	Completed			SW7471A	05/24/13 11:30	CCM		
Metal Digestion	Completed			3015A	06/06/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	05/23/13 10:42	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	05/22/13 10:38	JDP	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	06/10/13 14:10	PER	7440-36-0	
Arsenic	0.013	mg/L	0.002	SW6020	06/10/13 14:10	PER	7440-38-2	
Barium	0.157	mg/L	0.010	SW6020	06/10/13 14:10	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	06/10/13 14:10	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	06/10/13 14:10	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	06/10/13 14:10	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	06/10/13 14:10	PER	7440-48-4	
Copper	0.038	mg/L	0.002	SW6020	06/10/13 14:10	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	06/10/13 14:10	PER	7439-92-1	
Manganese	0.069	mg/L	0.010	SW6020	06/10/13 14:10	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	05/24/13 15:36	CCM	7439-97-6	
Nickel	0.019	mg/L	0.010	SW6020	06/10/13 14:10	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	06/10/13 14:10	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	06/10/13 14:10	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	06/10/13 14:10	PER	7440-62-2	
Zinc	0.017	mg/L	0.010	SW6020	06/10/13 14:10	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	205-99-2	

Lab Sample ID: S56527.01 (continued)
Sample Tag: MW-02-04(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	05/29/13 20:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1.1	SW8270C	05/29/13 20:16	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	129-00-0	

Lab Sample ID: S56527.01 (continued)
Sample Tag: MW-02-04(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	05/29/13 20:16	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	05/21/13 17:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	05/22/13 17:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	05/22/13 17:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	05/22/13 17:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	05/22/13 17:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	05/22/13 17:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	10061-01-5	
Toluene	1	ug/L	1	SW8260B	05/22/13 17:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	05/22/13 17:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	100-42-5	

Lab Sample ID: S56527.01 (continued)
Sample Tag: MW-02-04(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	05/22/13 17:50	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

74268

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO: Task#

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006440.0002013.
SAMPLER(S): PLEASE PRINT/SIGN NAME: Robert Prigge

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1,4-dioxane 8260SIM	Hexavalent Chromium
56527.01	05/21	12:50	MW-02-04 (3)	GW	7	X	X	X					3	2		1	3	1

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☒ Sampler DATE 5-21-13 TIME 14:50
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 5-21-13 TIME 1450

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE 5-21-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Talbots Faust DATE 5-21-13 TIME 1580

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56903.01(01)
Generated on 06/20/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56903.01
Project: Lansing Plant B0064481.2013.00603
Collected Date: 06/11/2013
Submitted Date/Time: 06/13/2013 15:50
Sampled by: Joe Rumschlag
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified.Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56903.01	MW-12-05	Groundwater	06/11/2013 18:10

Analytical Laboratory Report

Lab Sample ID: S56903.01
Sample Tag: MW-12-05
Collected Date/Time: 06/11/2013 18:10
Matrix: Groundwater
COC Reference: 81282

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/20/13 17:10	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 22:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 07:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 07:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 07:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 07:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 07:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	79-34-5	

Lab Sample ID: S56903.01 (continued)
Sample Tag: MW-12-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 07:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 07:10	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

81282

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-7910 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task # 06603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plants B00644B1.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joseph Lumsden

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs 8260	1,4-Dioxane SIM5
56903.01	6/11/13	1810	MW-12-05	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Joseph Lumsden / ARCADIS ☐ Sampler DATE: 6/13/13 TIME: 1450
RECEIVED BY: SIGNATURE/ORGANIZATION: Steve Foster RMT / DATE: 6/13/13 TIME: 1450
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabetha Fact DATE: 6/13/13 TIME: 1550

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56866.01(01)
Generated on 07/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56866.01-S56866.03
Project: Lansing Plant Project# B0064480.2013.00603
Collected Date: 06/12/2013
Submitted Date/Time: 06/13/2013 10:15
Sampled by: Joe Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56866.01	Trip Blank	Liquid	06/12/2013 00:01
S56866.02	MW-13-28	Groundwater	06/12/2013 15:25
S56866.03	MW-13-28 (5)	Groundwater	06/12/2013 15:26

Analytical Laboratory Report

Lab Sample ID: S56866.01
Sample Tag: Trip Blank
Collected Date/Time: 06/12/2013 00:01
Matrix: Liquid
COC Reference: 80885

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 02:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 02:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 02:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 02:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 02:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 02:42	WAT		

Lab Sample ID: S56866.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 02:42	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56866.02
Sample Tag: MW-13-28
Collected Date/Time: 06/12/2013 15:25
Matrix: Groundwater
COC Reference: 80885

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
3	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Inorganics								
Alkalinity as CaCO3	348	mg/L	1	2320B	06/24/13 12:30	JKB		
Bicarbonate	423	mg/L	1	2320B	06/24/13 13:20	JKB		
Carbonate	Not detected	mg/L	1	2320B	06/24/13 13:20	JKB		
Sulfate	107	mg/L	10	E300.0	06/14/13 06:44	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:21	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 13:20	PER	7440-36-0	
Arsenic, Dissolved	0.007	mg/L	0.002	SW6020	07/08/13 13:21	PER	7440-38-2	
Arsenic	0.009	mg/L	0.002	SW6020	07/08/13 13:20	PER	7440-38-2	
Barium, Dissolved	0.086	mg/L	0.010	SW6020	07/08/13 13:21	PER	7440-39-3	
Barium	0.100	mg/L	0.010	SW6020	07/08/13 13:20	PER	7440-39-3	
Boron, Dissolved	0.11	mg/L	0.04	SW6020	07/08/13 13:21	PER	7440-42-8	
Boron	0.11	mg/L	0.04	SW6020	07/08/13 13:20	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 13:21	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 13:20	PER	7440-43-9	
Calcium, Dissolved	134	mg/L	0.50	E200.8	07/08/13 17:50	PER	7440-70-2	
Calcium	139	mg/L	0.50	SW6020	07/08/13 17:42	PER	7440-70-2	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 13:21	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 13:20	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 13:21	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 13:20	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:21	PER	7440-50-8	
Copper	0.007	mg/L	0.002	SW6020	07/08/13 13:20	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:21	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 13:20	PER	7439-92-1	
Magnesium, Dissolved	46.7	mg/L	0.50	E200.8	07/08/13 17:50	PER	7439-95-4	
Magnesium	46.2	mg/L	0.50	SW6020	07/08/13 17:42	PER	7439-95-4	
Manganese, Dissolved	0.106	mg/L	0.010	SW6020	07/08/13 13:21	PER	7439-96-5	
Manganese	0.118	mg/L	0.010	SW6020	07/08/13 13:20	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:30	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:28	CCM	7439-97-6	

Lab Sample ID: S56866.02 (continued)
Sample Tag: MW-13-28

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Nickel, Dissolved	0.010	mg/L	0.010	SW6020	07/08/13 13:21	PER	7440-02-0	
Nickel	0.012	mg/L	0.010	SW6020	07/08/13 13:20	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 13:21	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 13:20	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 13:21	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 13:20	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:21	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 13:20	PER	7440-62-2	
Zinc, Dissolved	0.045	mg/L	0.010	SW6020	07/08/13 13:21	PER	7440-66-6	
Zinc	0.096	mg/L	0.010	SW6020	07/08/13 13:20	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/27/13 23:59	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/27/13 23:59	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	06/27/13 23:59	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/27/13 23:59	PL	117-81-7	

Lab Sample ID: S56866.02 (continued)
Sample Tag: MW-13-28

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Fluoranthene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/27/13 23:59	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 19:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 03:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 03:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 03:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	156-59-2	

Lab Sample ID: S56866.02 (continued)
Sample Tag: MW-13-28

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 03:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 03:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 03:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 03:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56866.03
Sample Tag: MW-13-28 (5)
Collected Date/Time: 06/12/2013 15:26
Matrix: Groundwater
COC Reference: 80885

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
Metals								
Antimony, Dissolved	0.003	mg/L	0.002	SW6020	07/08/13 13:23	PER	7440-36-0	
Arsenic, Dissolved	0.007	mg/L	0.002	SW6020	07/08/13 13:23	PER	7440-38-2	
Barium, Dissolved	0.090	mg/L	0.010	SW6020	07/08/13 13:23	PER	7440-39-3	
Boron, Dissolved	0.12	mg/L	0.04	SW6020	07/08/13 13:23	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 13:23	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 13:23	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 13:23	PER	7440-48-4	
Copper, Dissolved	0.003	mg/L	0.002	SW6020	07/08/13 13:23	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:23	PER	7439-92-1	
Manganese, Dissolved	0.112	mg/L	0.010	SW6020	07/08/13 13:23	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:32	CCM	7439-97-6	
Nickel, Dissolved	0.011	mg/L	0.010	SW6020	07/08/13 13:23	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 13:23	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 13:23	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:23	PER	7440-62-2	
Zinc, Dissolved	0.062	mg/L	0.010	SW6020	07/08/13 13:23	PER	7440-66-6	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

80885

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1960 FAX NO.:
P.O. NO.: DO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.: Task # 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project # B006448O.2013 00603
SAMPLER(S) PLEASE PRINT/SIGN NAME: Joe Rumsey

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs 8260	SVOCs Metals TAL	Dissolved Metal	1,4-Dioxane Stm	Calcium/Magnesium	sulfide Alkalinity	Total Carbonate and bicarbonate			Special Instructions
576866.01	6/12/13	-	Trip Blank	L	2		X						4									
.02	6/12/13	1525	MW-13-28	GW	6								X	X	X	X	X	4	X	X		
.03	6/12/13	1526	MW-13-28(5)													X						

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Joe Rumsey / Arcadis ☒ Sampler	6/12/13	1837
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Steve Stillman	6/12/13	1837
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Mew	6-13-13	845

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	6-13-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
T Christian Faust	6-13-13	1015

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56867.01(01)
Generated on 07/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56867.01-S56867.03
Project: Lansing Plant 6 Project# B0064481.2013
Collected Date: 06/12/2013
Submitted Date/Time: 06/13/2013 10:15
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56867.01	Trip Blank	Liquid	06/12/2013 08:00
S56867.02	Dup#9	Groundwater	06/12/2013 00:01
S56867.03	MW-12-12	Groundwater	06/12/2013 15:40

Analytical Laboratory Report

Lab Sample ID: S56867.01
Sample Tag: Trip Blank
Collected Date/Time: 06/12/2013 08:00
Matrix: Liquid
COC Reference: 74285

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 03:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 03:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 03:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 03:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 03:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 03:24	WAT		

Lab Sample ID: S56867.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 03:24	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56867.02
Sample Tag: Dup#9
Collected Date/Time: 06/12/2013 00:01
Matrix: Groundwater
COC Reference: 74285

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
2	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:28	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 13:30	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:28	PER	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020	07/08/13 13:30	PER	7440-38-2	
Barium, Dissolved	0.072	mg/L	0.010	SW6020	07/08/13 13:28	PER	7440-39-3	
Barium	0.130	mg/L	0.010	SW6020	07/08/13 13:30	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	07/08/13 13:28	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020	07/08/13 13:30	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 13:28	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 13:30	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 13:28	PER	7440-47-3	
Chromium	0.024	mg/L	0.010	SW6020	07/08/13 13:30	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 13:28	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 13:30	PER	7440-48-4	
Copper, Dissolved	0.003	mg/L	0.002	SW6020	07/08/13 13:28	PER	7440-50-8	
Copper	0.017	mg/L	0.002	SW6020	07/08/13 13:30	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:28	PER	7439-92-1	
Lead	0.006	mg/L	0.002	SW6020	07/08/13 13:30	PER	7439-92-1	
Manganese, Dissolved	0.106	mg/L	0.010	SW6020	07/08/13 13:28	PER	7439-96-5	
Manganese	0.431	mg/L	0.010	SW6020	07/08/13 13:30	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:36	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:34	CCM	7439-97-6	
Nickel, Dissolved	0.037	mg/L	0.010	SW6020	07/08/13 13:28	PER	7440-02-0	
Nickel	0.075	mg/L	0.010	SW6020	07/08/13 13:30	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 13:28	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 13:30	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 13:28	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 13:30	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:28	PER	7440-62-2	
Vanadium	0.012	mg/L	0.002	SW6020	07/08/13 13:30	PER	7440-62-2	
Zinc, Dissolved	0.011	mg/L	0.010	SW6020	07/08/13 13:28	PER	7440-66-6	
Zinc	0.044	mg/L	0.010	SW6020	07/08/13 13:30	PER	7440-66-6	

Lab Sample ID: S56867.02 (continued)
Sample Tag: Dup#9

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/28/13 00:28	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 00:28	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 00:28	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	06/28/13 00:28	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/28/13 00:28	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	88-75-5	

Lab Sample ID: S56867.02 (continued)
Sample Tag: Dup#9

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 00:28	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 20:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 03:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 03:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 03:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 03:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 03:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	108-87-2	

Lab Sample ID: S56867.02 (continued)
Sample Tag: Dup#9

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 03:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 03:44	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56867.03
Sample Tag: MW-12-12
Collected Date/Time: 06/12/2013 15:40
Matrix: Groundwater
COC Reference: 74285

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
2	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:34	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 13:32	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020	07/08/13 13:34	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020	07/08/13 13:32	PER	7440-38-2	
Barium, Dissolved	0.069	mg/L	0.010	SW6020	07/08/13 13:34	PER	7440-39-3	
Barium	0.073	mg/L	0.010	SW6020	07/08/13 13:32	PER	7440-39-3	
Boron, Dissolved	0.04	mg/L	0.04	SW6020	07/08/13 13:34	PER	7440-42-8	
Boron	0.04	mg/L	0.04	SW6020	07/08/13 13:32	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 13:34	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 13:32	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 13:34	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 13:32	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 13:34	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 13:32	PER	7440-48-4	
Copper, Dissolved	0.003	mg/L	0.002	SW6020	07/08/13 13:34	PER	7440-50-8	
Copper	0.005	mg/L	0.002	SW6020	07/08/13 13:32	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:34	PER	7439-92-1	
Lead	0.002	mg/L	0.002	SW6020	07/08/13 13:32	PER	7439-92-1	
Manganese, Dissolved	0.081	mg/L	0.010	SW6020	07/08/13 13:34	PER	7439-96-5	
Manganese	0.106	mg/L	0.010	SW6020	07/08/13 13:32	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:39	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:37	CCM	7439-97-6	
Nickel, Dissolved	0.032	mg/L	0.010	SW6020	07/08/13 13:34	PER	7440-02-0	
Nickel	0.035	mg/L	0.010	SW6020	07/08/13 13:32	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 13:34	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 13:32	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 13:34	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 13:32	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 13:34	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 13:32	PER	7440-62-2	
Zinc, Dissolved	0.010	mg/L	0.010	SW6020	07/08/13 13:34	PER	7440-66-6	
Zinc	0.014	mg/L	0.010	SW6020	07/08/13 13:32	PER	7440-66-6	

Lab Sample ID: S56867.03 (continued)
Sample Tag: MW-12-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 00:58	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 00:58	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	06/28/13 00:58	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	88-75-5	

Lab Sample ID: S56867.03 (continued)
Sample Tag: MW-12-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 00:58	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 20:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 04:05	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 04:05	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 04:05	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 04:05	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 04:05	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	108-87-2	

Lab Sample ID: S56867.03 (continued)
Sample Tag: MW-12-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 04:05	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 04:05	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74285

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B006446.0001.2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 13 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	Ru, Diss, Al	Sulfide (Sulfate)
556867.01	6/12	0800	TRIP BLANK	L	1		1						X					
.02	6/12		DUP #9	GW	7	2	3	2					X	X		X	X	X
.03	6/12	1540	MW-12-12	GW	7	2	3	2					X	X		X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] ☒ Sampler DATE: 6/12/13 TIME: 1900
RECEIVED BY: SIGNATURE/ORGANIZATION: Fed Stolarge DATE: 6/12/13 TIME: 1900

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] DATE: 6-13-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Faust DATE: 6-13-13 TIME: 1015

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] Merit DATE: 6-13-13 TIME: 845

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56868.01(01)
Generated on 07/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56868.01-S56868.04
Project: Lansing Plant Project# B0064479.2013.00603
Collected Date: 06/12/2013
Submitted Date/Time: 06/13/2013 10:15
Sampled by: Joe Rumschlag
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56868.01	Trip Blank	Liquid	06/12/2013 00:01
S56868.02	MW-12-06	Groundwater	06/12/2013 09:35
S56868.03	MW-12-06 MS	Groundwater	06/12/2013 09:35
S56868.04	MW-12-06 MSD	Groundwater	06/12/2013 09:35

Analytical Laboratory Report

Lab Sample ID: S56868.01
Sample Tag: Trip Blank
Collected Date/Time: 06/12/2013 00:01
Matrix: Liquid
COC Reference: 74275

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/26/13 16:05	LBR		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/26/13 14:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/26/13 14:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/26/13 14:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/26/13 14:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/26/13 14:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/26/13 14:13	WAT		

Lab Sample ID: S56868.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/26/13 14:13	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56868.02
Sample Tag: MW-12-06
Collected Date/Time: 06/12/2013 09:35
Matrix: Groundwater
COC Reference: 74275

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 13:39	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020	07/08/13 13:39	PER	7440-38-2	
Barium	0.052	mg/L	0.010	SW6020	07/08/13 13:39	PER	7440-39-3	
Boron	0.19	mg/L	0.04	SW6020	07/08/13 13:39	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 13:39	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 13:39	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 13:39	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	07/08/13 13:39	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 13:39	PER	7439-92-1	
Manganese	0.040	mg/L	0.010	SW6020	07/08/13 13:39	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 15:17	CCM	7439-97-6	
Nickel	0.012	mg/L	0.010	SW6020	07/08/13 13:39	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 13:39	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 13:39	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 13:39	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	07/08/13 13:39	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	91-58-7	

Lab Sample ID: S56868.02 (continued)
Sample Tag: MW-12-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 01:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 01:27	PL	84-66-2	
Dimethyl phthalate	2	ug/L	1	SW8270C	06/28/13 01:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/28/13 01:27	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 01:27	PL	118-74-1	

Lab Sample ID: S56868.02 (continued)
Sample Tag: MW-12-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/21/13 19:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/26/13 13:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/26/13 13:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/26/13 13:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/26/13 13:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/26/13 13:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/26/13 13:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	120-82-1	

Lab Sample ID: S56868.02 (continued)
Sample Tag: MW-12-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/26/13 13:52	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56868.03
Sample Tag: MW-12-06 MS
Collected Date/Time: 06/12/2013 09:35
Matrix: Groundwater
COC Reference: 74275

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Metals								
Antimony	0.260	mg/L	0.002	SW6020	07/08/13 13:41	PER	7440-36-0	
Arsenic	0.251	mg/L	0.002	SW6020	07/08/13 13:41	PER	7440-38-2	
Barium	0.313	mg/L	0.010	SW6020	07/08/13 13:41	PER	7440-39-3	
Boron	0.45	mg/L	0.04	SW6020	07/08/13 13:41	PER	7440-42-8	
Cadmium	0.263	mg/L	0.0010	SW6020	07/08/13 13:41	PER	7440-43-9	
Chromium	0.252	mg/L	0.010	SW6020	07/08/13 13:41	PER	7440-47-3	
Cobalt	0.246	mg/L	0.010	SW6020	07/08/13 13:41	PER	7440-48-4	
Copper	0.240	mg/L	0.002	SW6020	07/08/13 13:41	PER	7440-50-8	
Lead	0.247	mg/L	0.002	SW6020	07/08/13 13:41	PER	7439-92-1	
Manganese	0.285	mg/L	0.010	SW6020	07/08/13 13:41	PER	7439-96-5	
Mercury	0.0019	mg/L	0.0001	SW7471A	06/14/13 15:19	CCM	7439-97-6	
Nickel	0.258	mg/L	0.010	SW6020	07/08/13 13:41	PER	7440-02-0	
Selenium	0.236	mg/L	0.005	SW6020	07/08/13 13:41	PER	7782-49-2	
Silver	0.251	mg/L	0.0005	SW6020	07/08/13 13:41	PER	7440-22-4	
Vanadium	0.259	mg/L	0.002	SW6020	07/08/13 13:41	PER	7440-62-2	
Zinc	0.253	mg/L	0.010	SW6020	07/08/13 13:41	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	52	ug/L	1	SW8270C	06/28/13 01:56	PL	83-32-9	1
Acenaphthylene	48	ug/L	1	SW8270C	06/28/13 01:56	PL	208-96-8	1
Acetophenone	41	ug/L	1	SW8270C	06/28/13 01:56	PL	98-86-2	1
Anthracene	50	ug/L	1	SW8270C	06/28/13 01:56	PL	120-12-7	1
Atrazine	53	ug/L	1	SW8270C	06/28/13 01:56	PL	1912-24-9	1
1,1'-Biphenyl	45	ug/L	1	SW8270C	06/28/13 01:56	PL	92-52-4	1
4-Bromophenyl phenyl ether	50	ug/L	1	SW8270C	06/28/13 01:56	PL	101-55-3	1
di-n-Butyl phthalate	56	ug/L	1	SW8270C	06/28/13 01:56	PL	84-74-2	1
Benzaldehyde	35	ug/L	1	SW8270C	06/28/13 01:56	PL	100-52-7	1
Benzo(a)anthracene	50	ug/L	1	SW8270C	06/28/13 01:56	PL	56-55-3	1
Benzo(a)pyrene	48	ug/L	1	SW8270C	06/28/13 01:56	PL	50-32-8	1
Benzo(b)fluoranthene	47	ug/L	1	SW8270C	06/28/13 01:56	PL	205-99-2	1
Benzo(ghi)perylene	46	ug/L	1	SW8270C	06/28/13 01:56	PL	191-24-2	1
Benzo(k)fluoranthene	47	ug/L	1	SW8270C	06/28/13 01:56	PL	207-08-9	1
Butyl benzyl phthalate	52	ug/L	1	SW8270C	06/28/13 01:56	PL	85-68-7	1

1-Sample spiked at 51 mg/l

Lab Sample ID: S56868.03 (continued)
Sample Tag: MW-12-06 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	46	ug/L	1	SW8270C	06/28/13 01:56	PL	91-58-7	1
2-Chlorophenol	36	ug/L	1	SW8270C	06/28/13 01:56	PL	95-57-8	1
4-Chloro-3-methylphenol	45	ug/L	1	SW8270C	06/28/13 01:56	PL	59-50-7	1
4-Chloroaniline	31	ug/L	1	SW8270C	06/28/13 01:56	PL	106-47-8	1
4-Chlorophenyl phenyl ether	57	ug/L	1	SW8270C	06/28/13 01:56	PL	7005-72-3	1
Caprolactam	7	ug/L	1	SW8270C	06/28/13 01:56	PL	105-60-2	1
Carbazole	47	ug/L	1	SW8270C	06/28/13 01:56	PL	86-74-8	1
bis(2-Chloroethoxy)methane	42	ug/L	1	SW8270C	06/28/13 01:56	PL	111-91-1	1
bis(2-Chloroethyl)ether	39	ug/L	1	SW8270C	06/28/13 01:56	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	39	ug/L	1	SW8270C	06/28/13 01:56	PL	108-60-1	1
Chrysene	51	ug/L	1	SW8270C	06/28/13 01:56	PL	218-01-9	1
2,4-Dichlorophenol	43	ug/L	1	SW8270C	06/28/13 01:56	PL	120-83-2	1
2,4-Dimethylphenol	43	ug/L	1	SW8270C	06/28/13 01:56	PL	105-67-9	1
2,4-Dinitrophenol	35	ug/L	1	SW8270C	06/28/13 01:56	PL	51-28-5	1
2,4-Dinitrotoluene	52	ug/L	1	SW8270C	06/28/13 01:56	PL	121-14-2	1
2,6-Dinitrotoluene	53	ug/L	1	SW8270C	06/28/13 01:56	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	43	ug/L	1	SW8270C	06/28/13 01:56	PL	534-52-1	1
Dibenzo(ah)anthracene	46	ug/L	2	SW8270C	06/28/13 01:56	PL	53-70-3	1
Dibenzofuran	47	ug/L	1	SW8270C	06/28/13 01:56	PL	132-64-9	1
Diethyl phthalate	50	ug/L	2	SW8270C	06/28/13 01:56	PL	84-66-2	1
Dimethyl phthalate	52	ug/L	1	SW8270C	06/28/13 01:56	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	51	ug/L	1	SW8270C	06/28/13 01:56	PL	117-81-7	1
Fluoranthene	50	ug/L	1	SW8270C	06/28/13 01:56	PL	206-44-0	1
Fluorene	48	ug/L	1	SW8270C	06/28/13 01:56	PL	86-73-7	1
Hexachlorobutadiene	35	ug/L	1	SW8270C	06/28/13 01:56	PL	87-68-3	1
Hexachlorocyclopentadiene	40	ug/L	1	SW8270C	06/28/13 01:56	PL	77-47-4	1
Hexachloroethane	32	ug/L	1	SW8270C	06/28/13 01:56	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	44	ug/L	1	SW8270C	06/28/13 01:56	PL	193-39-5	1
Isophorone	48	ug/L	1	SW8270C	06/28/13 01:56	PL	78-59-1	1
2-Methylnaphthalene	43	ug/L	1	SW8270C	06/28/13 01:56	PL	91-57-6	1
2-Methylphenol	36	ug/L	1	SW8270C	06/28/13 01:56	PL	95-48-7	1
3-, 4-Methylphenol	67	ug/L	1	SW8270C	06/28/13 01:56	PL	3/4-Cresol	1
2-Nitroaniline	48	ug/L	1	SW8270C	06/28/13 01:56	PL	88-74-4	1
2-Nitrophenol	42	ug/L	1	SW8270C	06/28/13 01:56	PL	88-75-5	1
3-Nitroaniline	39	ug/L	1	SW8270C	06/28/13 01:56	PL	99-09-2	1
4-Nitroaniline	43	ug/L	1	SW8270C	06/28/13 01:56	PL	100-01-6	1
4-Nitrophenol	32	ug/L	1	SW8270C	06/28/13 01:56	PL	100-02-7	1
N-Nitrosodi-n-propylamine	42	ug/L	1	SW8270C	06/28/13 01:56	PL	621-64-7	1
N-Nitrosodiphenylamine	50	ug/L	1	SW8270C	06/28/13 01:56	PL	86-30-6	1
Naphthalene	41	ug/L	1	SW8270C	06/28/13 01:56	PL	91-20-3	1
Nitrobenzene	41	ug/L	1	SW8270C	06/28/13 01:56	PL	98-95-3	1
di-n-Octyl phthalate	54	ug/L	1	SW8270C	06/28/13 01:56	PL	117-84-0	1
Pentachlorophenol	46	ug/L	1	SW8270C	06/28/13 01:56	PL	87-86-5	1
Phenanthrene	55	ug/L	1	SW8270C	06/28/13 01:56	PL	85-01-8	1
Phenol	25	ug/L	1	SW8270C	06/28/13 01:56	PL	108-95-2	1
Pyrene	49	ug/L	1	SW8270C	06/28/13 01:56	PL	129-00-0	1
2,4,5-Trichlorophenol	49	ug/L	1	SW8270C	06/28/13 01:56	PL	95-95-4	1
2,4,6-Trichlorophenol	47	ug/L	1	SW8270C	06/28/13 01:56	PL	88-06-2	1

1-Sample spiked at 51 mg/l

Lab Sample ID: S56868.03 (continued)
Sample Tag: MW-12-06 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobenzene	47	ug/L	1	SW8270C	06/28/13 01:56	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	54	ug/L	5	SW8260B - SIM	06/21/13 22:35	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	44	ug/L	1	SW8260B	06/26/13 12:06	WAT	76-13-1	2
Acetone	40	ug/L	10	SW8260B	06/26/13 12:06	WAT	67-64-1	2
Carbon disulfide	39	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-15-0	2
Methyl Acetate	43	ug/L	10	SW8260B	06/26/13 12:06	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	58	ug/L	1	SW8260B	06/26/13 12:06	WAT	1634-04-4	2
2-Butanone (MEK)	43	ug/L	10	SW8260B	06/26/13 12:06	WAT	78-93-3	2
Dichlorodifluoromethane	40	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-71-8	2
Chloromethane	38	ug/L	1	SW8260B	06/26/13 12:06	WAT	74-87-3	2
Vinyl chloride	37	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-01-4	2
Bromomethane	33	ug/L	1	SW8260B	06/26/13 12:06	WAT	74-83-9	2
Chloroethane	33	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-00-3	2
Trichlorofluoromethane	32	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-69-4	2
1,1-Dichloroethene	42	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-35-4	2
Methylene chloride	45	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-09-2	2
trans-1,2-Dichloroethene	44	ug/L	1	SW8260B	06/26/13 12:06	WAT	156-60-5	2
1,1-Dichloroethane	48	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-34-3	2
cis-1,2-Dichloroethene	46	ug/L	1	SW8260B	06/26/13 12:06	WAT	156-59-2	2
Chloroform	46	ug/L	1	SW8260B	06/26/13 12:06	WAT	67-66-3	2
1,1,1-Trichloroethane	42	ug/L	1	SW8260B	06/26/13 12:06	WAT	71-55-6	2
Cyclohexane	40	ug/L	1	SW8260B	06/26/13 12:06	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	51	ug/L	10	SW8260B	06/26/13 12:06	WAT	108-10-1	2
2-Hexanone	48	ug/L	10	SW8260B	06/26/13 12:06	WAT	591-78-6	2
Carbon tetrachloride	36	ug/L	1	SW8260B	06/26/13 12:06	WAT	56-23-5	2
Benzene	42	ug/L	1	SW8260B	06/26/13 12:06	WAT	71-43-2	2
1,2-Dichloroethane	39	ug/L	1	SW8260B	06/26/13 12:06	WAT	107-06-2	2
Trichloroethene	41	ug/L	1	SW8260B	06/26/13 12:06	WAT	79-01-6	2
1,2-Dichloropropane	44	ug/L	1	SW8260B	06/26/13 12:06	WAT	78-87-5	2
Bromodichloromethane	38	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-27-4	2
Methyl cyclohexane	37	ug/L	1	SW8260B	06/26/13 12:06	WAT	108-87-2	2
cis-1,3-Dichloropropene	41	ug/L	1	SW8260B	06/26/13 12:06	WAT	10061-01-5	2
Toluene	41	ug/L	1	SW8260B	06/26/13 12:06	WAT	108-88-3	2
trans-1,3-Dichloropropene	41	ug/L	1	SW8260B	06/26/13 12:06	WAT	10061-02-6	2
1,1,2-Trichloroethane	45	ug/L	1	SW8260B	06/26/13 12:06	WAT	79-00-5	2
Tetrachloroethene	37	ug/L	1	SW8260B	06/26/13 12:06	WAT	127-18-4	2
Dibromochloromethane	38	ug/L	1	SW8260B	06/26/13 12:06	WAT	124-48-1	2
Chlorobenzene	43	ug/L	1	SW8260B	06/26/13 12:06	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	48	ug/L	1	SW8260B	06/26/13 12:06	WAT	79-34-5	2
Ethylbenzene	42	ug/L	1	SW8260B	06/26/13 12:06	WAT	100-41-4	2
p,m-Xylene	84	ug/L	2	SW8260B	06/26/13 12:06	WAT		2
o-Xylene	42	ug/L	1	SW8260B	06/26/13 12:06	WAT	95-47-6	2
Styrene	44	ug/L	1	SW8260B	06/26/13 12:06	WAT	100-42-5	2

1-Sample spiked at 51 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56868.03 (continued)
Sample Tag: MW-12-06 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	43	ug/L	1	SW8260B	06/26/13 12:06	WAT	98-82-8	1
Bromoform	41	ug/L	1	SW8260B	06/26/13 12:06	WAT	75-25-2	1
1,3-Dichlorobenzene	44	ug/L	1	SW8260B	06/26/13 12:06	WAT	541-73-1	1
1,4-Dichlorobenzene	43	ug/L	1	SW8260B	06/26/13 12:06	WAT	106-46-7	1
1,2-Dichlorobenzene	45	ug/L	1	SW8260B	06/26/13 12:06	WAT	95-50-1	1
1,2,4-Trichlorobenzene	56	ug/L	1	SW8260B	06/26/13 12:06	WAT	120-82-1	1
1,2-Dibromoethane	47	ug/L	1	SW8260B	06/26/13 12:06	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	54	ug/L	1	SW8260B	06/26/13 12:06	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S56868.04
Sample Tag: MW-12-06 MSD
Collected Date/Time: 06/12/2013 09:35
Matrix: Groundwater
COC Reference: 74275

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Metals								
Antimony	0.258	mg/L	0.002	SW6020	07/08/13 13:43	PER	7440-36-0	
Arsenic	0.257	mg/L	0.002	SW6020	07/08/13 13:43	PER	7440-38-2	
Barium	0.313	mg/L	0.010	SW6020	07/08/13 13:43	PER	7440-39-3	
Boron	0.46	mg/L	0.04	SW6020	07/08/13 13:43	PER	7440-42-8	
Cadmium	0.259	mg/L	0.0010	SW6020	07/08/13 13:43	PER	7440-43-9	
Chromium	0.252	mg/L	0.010	SW6020	07/08/13 13:43	PER	7440-47-3	
Cobalt	0.252	mg/L	0.010	SW6020	07/08/13 13:43	PER	7440-48-4	
Copper	0.242	mg/L	0.002	SW6020	07/08/13 13:43	PER	7440-50-8	
Lead	0.247	mg/L	0.002	SW6020	07/08/13 13:43	PER	7439-92-1	
Manganese	0.289	mg/L	0.010	SW6020	07/08/13 13:43	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	06/14/13 15:21	CCM	7439-97-6	
Nickel	0.255	mg/L	0.010	SW6020	07/08/13 13:43	PER	7440-02-0	
Selenium	0.257	mg/L	0.005	SW6020	07/08/13 13:43	PER	7782-49-2	
Silver	0.253	mg/L	0.0005	SW6020	07/08/13 13:43	PER	7440-22-4	
Vanadium	0.259	mg/L	0.002	SW6020	07/08/13 13:43	PER	7440-62-2	
Zinc	0.255	mg/L	0.010	SW6020	07/08/13 13:43	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	43	ug/L	1	SW8270C	06/28/13 02:26	PL	83-32-9	1
Acenaphthylene	40	ug/L	1	SW8270C	06/28/13 02:26	PL	208-96-8	1
Acetophenone	35	ug/L	1	SW8270C	06/28/13 02:26	PL	98-86-2	1
Anthracene	42	ug/L	1	SW8270C	06/28/13 02:26	PL	120-12-7	1
Atrazine	44	ug/L	1	SW8270C	06/28/13 02:26	PL	1912-24-9	1
1,1'-Biphenyl	37	ug/L	1	SW8270C	06/28/13 02:26	PL	92-52-4	1
4-Bromophenyl phenyl ether	41	ug/L	1	SW8270C	06/28/13 02:26	PL	101-55-3	1
di-n-Butyl phthalate	47	ug/L	1	SW8270C	06/28/13 02:26	PL	84-74-2	1
Benzaldehyde	32	ug/L	1	SW8270C	06/28/13 02:26	PL	100-52-7	1
Benzo(a)anthracene	41	ug/L	1	SW8270C	06/28/13 02:26	PL	56-55-3	1
Benzo(a)pyrene	39	ug/L	1	SW8270C	06/28/13 02:26	PL	50-32-8	1
Benzo(b)fluoranthene	39	ug/L	1	SW8270C	06/28/13 02:26	PL	205-99-2	1
Benzo(ghi)perylene	38	ug/L	1	SW8270C	06/28/13 02:26	PL	191-24-2	1
Benzo(k)fluoranthene	38	ug/L	1	SW8270C	06/28/13 02:26	PL	207-08-9	1
Butyl benzyl phthalate	43	ug/L	1	SW8270C	06/28/13 02:26	PL	85-68-7	1

1-Sample spiked at 51 mg/l

Lab Sample ID: S56868.04 (continued)
Sample Tag: MW-12-06 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	38	ug/L	1	SW8270C	06/28/13 02:26	PL	91-58-7	1
2-Chlorophenol	34	ug/L	1	SW8270C	06/28/13 02:26	PL	95-57-8	1
4-Chloro-3-methylphenol	39	ug/L	1	SW8270C	06/28/13 02:26	PL	59-50-7	1
4-Chloroaniline	29	ug/L	1	SW8270C	06/28/13 02:26	PL	106-47-8	1
4-Chlorophenyl phenyl ether	47	ug/L	1	SW8270C	06/28/13 02:26	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270C	06/28/13 02:26	PL	105-60-2	1
Carbazole	39	ug/L	1	SW8270C	06/28/13 02:26	PL	86-74-8	1
bis(2-Chloroethoxy)methane	34	ug/L	1	SW8270C	06/28/13 02:26	PL	111-91-1	1
bis(2-Chloroethyl)ether	33	ug/L	1	SW8270C	06/28/13 02:26	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	33	ug/L	1	SW8270C	06/28/13 02:26	PL	108-60-1	1
Chrysene	41	ug/L	1	SW8270C	06/28/13 02:26	PL	218-01-9	1
2,4-Dichlorophenol	37	ug/L	1	SW8270C	06/28/13 02:26	PL	120-83-2	1
2,4-Dimethylphenol	38	ug/L	1	SW8270C	06/28/13 02:26	PL	105-67-9	1
2,4-Dinitrophenol	29	ug/L	1	SW8270C	06/28/13 02:26	PL	51-28-5	1
2,4-Dinitrotoluene	43	ug/L	1	SW8270C	06/28/13 02:26	PL	121-14-2	1
2,6-Dinitrotoluene	44	ug/L	1	SW8270C	06/28/13 02:26	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	35	ug/L	1	SW8270C	06/28/13 02:26	PL	534-52-1	1
Dibenzo(ah)anthracene	37	ug/L	2	SW8270C	06/28/13 02:26	PL	53-70-3	1
Dibenzofuran	39	ug/L	1	SW8270C	06/28/13 02:26	PL	132-64-9	1
Diethyl phthalate	41	ug/L	2	SW8270C	06/28/13 02:26	PL	84-66-2	1
Dimethyl phthalate	43	ug/L	1	SW8270C	06/28/13 02:26	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	46	ug/L	1	SW8270C	06/28/13 02:26	PL	117-81-7	1
Fluoranthene	41	ug/L	1	SW8270C	06/28/13 02:26	PL	206-44-0	1
Fluorene	40	ug/L	1	SW8270C	06/28/13 02:26	PL	86-73-7	1
Hexachlorobutadiene	32	ug/L	1	SW8270C	06/28/13 02:26	PL	87-68-3	1
Hexachlorocyclopentadiene	33	ug/L	1	SW8270C	06/28/13 02:26	PL	77-47-4	1
Hexachloroethane	29	ug/L	1	SW8270C	06/28/13 02:26	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	36	ug/L	1	SW8270C	06/28/13 02:26	PL	193-39-5	1
Isophorone	40	ug/L	1	SW8270C	06/28/13 02:26	PL	78-59-1	1
2-Methylnaphthalene	35	ug/L	1	SW8270C	06/28/13 02:26	PL	91-57-6	1
2-Methylphenol	34	ug/L	1	SW8270C	06/28/13 02:26	PL	95-48-7	1
3-, 4-Methylphenol	65	ug/L	1	SW8270C	06/28/13 02:26	PL	3/4-Cresol	1
2-Nitroaniline	40	ug/L	1	SW8270C	06/28/13 02:26	PL	88-74-4	1
2-Nitrophenol	35	ug/L	1	SW8270C	06/28/13 02:26	PL	88-75-5	1
3-Nitroaniline	35	ug/L	1	SW8270C	06/28/13 02:26	PL	99-09-2	1
4-Nitroaniline	37	ug/L	1	SW8270C	06/28/13 02:26	PL	100-01-6	1
4-Nitrophenol	31	ug/L	1	SW8270C	06/28/13 02:26	PL	100-02-7	1
N-Nitrosodi-n-propylamine	36	ug/L	1	SW8270C	06/28/13 02:26	PL	621-64-7	1
N-Nitrosodiphenylamine	41	ug/L	1	SW8270C	06/28/13 02:26	PL	86-30-6	1
Naphthalene	34	ug/L	1	SW8270C	06/28/13 02:26	PL	91-20-3	1
Nitrobenzene	34	ug/L	1	SW8270C	06/28/13 02:26	PL	98-95-3	1
di-n-Octyl phthalate	48	ug/L	1	SW8270C	06/28/13 02:26	PL	117-84-0	1
Pentachlorophenol	37	ug/L	1	SW8270C	06/28/13 02:26	PL	87-86-5	1
Phenanthrene	46	ug/L	1	SW8270C	06/28/13 02:26	PL	85-01-8	1
Phenol	25	ug/L	1	SW8270C	06/28/13 02:26	PL	108-95-2	1
Pyrene	41	ug/L	1	SW8270C	06/28/13 02:26	PL	129-00-0	1
2,4,5-Trichlorophenol	41	ug/L	1	SW8270C	06/28/13 02:26	PL	95-95-4	1
2,4,6-Trichlorophenol	40	ug/L	1	SW8270C	06/28/13 02:26	PL	88-06-2	1

1-Sample spiked at 51 mg/l

Lab Sample ID: S56868.04 (continued)
Sample Tag: MW-12-06 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobenzene	39	ug/L	1	SW8270C	06/28/13 02:26	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	55	ug/L	5	SW8260B - SIM	06/21/13 22:57	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	58	ug/L	1	SW8260B	06/26/13 12:28	WAT	76-13-1	2
Acetone	51	ug/L	10	SW8260B	06/26/13 12:28	WAT	67-64-1	2
Carbon disulfide	51	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-15-0	2
Methyl Acetate	56	ug/L	10	SW8260B	06/26/13 12:28	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	74	ug/L	1	SW8260B	06/26/13 12:28	WAT	1634-04-4	2
2-Butanone (MEK)	51	ug/L	10	SW8260B	06/26/13 12:28	WAT	78-93-3	2
Dichlorodifluoromethane	52	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-71-8	2
Chloromethane	48	ug/L	1	SW8260B	06/26/13 12:28	WAT	74-87-3	2
Vinyl chloride	46	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-01-4	2
Bromomethane	42	ug/L	1	SW8260B	06/26/13 12:28	WAT	74-83-9	2
Chloroethane	42	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-00-3	2
Trichlorofluoromethane	43	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-69-4	2
1,1-Dichloroethene	54	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-35-4	2
Methylene chloride	56	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-09-2	2
trans-1,2-Dichloroethene	55	ug/L	1	SW8260B	06/26/13 12:28	WAT	156-60-5	2
1,1-Dichloroethane	60	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-34-3	2
cis-1,2-Dichloroethene	58	ug/L	1	SW8260B	06/26/13 12:28	WAT	156-59-2	2
Chloroform	57	ug/L	1	SW8260B	06/26/13 12:28	WAT	67-66-3	2
1,1,1-Trichloroethane	54	ug/L	1	SW8260B	06/26/13 12:28	WAT	71-55-6	2
Cyclohexane	53	ug/L	1	SW8260B	06/26/13 12:28	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	69	ug/L	10	SW8260B	06/26/13 12:28	WAT	108-10-1	2
2-Hexanone	65	ug/L	10	SW8260B	06/26/13 12:28	WAT	591-78-6	2
Carbon tetrachloride	47	ug/L	1	SW8260B	06/26/13 12:28	WAT	56-23-5	2
Benzene	53	ug/L	1	SW8260B	06/26/13 12:28	WAT	71-43-2	2
1,2-Dichloroethane	50	ug/L	1	SW8260B	06/26/13 12:28	WAT	107-06-2	2
Trichloroethene	52	ug/L	1	SW8260B	06/26/13 12:28	WAT	79-01-6	2
1,2-Dichloropropane	56	ug/L	1	SW8260B	06/26/13 12:28	WAT	78-87-5	2
Bromodichloromethane	50	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-27-4	2
Methyl cyclohexane	56	ug/L	1	SW8260B	06/26/13 12:28	WAT	108-87-2	2
cis-1,3-Dichloropropene	54	ug/L	1	SW8260B	06/26/13 12:28	WAT	10061-01-5	2
Toluene	53	ug/L	1	SW8260B	06/26/13 12:28	WAT	108-88-3	2
trans-1,3-Dichloropropene	55	ug/L	1	SW8260B	06/26/13 12:28	WAT	10061-02-6	2
1,1,2-Trichloroethane	59	ug/L	1	SW8260B	06/26/13 12:28	WAT	79-00-5	2
Tetrachloroethene	48	ug/L	1	SW8260B	06/26/13 12:28	WAT	127-18-4	2
Dibromochloromethane	51	ug/L	1	SW8260B	06/26/13 12:28	WAT	124-48-1	2
Chlorobenzene	54	ug/L	1	SW8260B	06/26/13 12:28	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	63	ug/L	1	SW8260B	06/26/13 12:28	WAT	79-34-5	2
Ethylbenzene	53	ug/L	1	SW8260B	06/26/13 12:28	WAT	100-41-4	2
p,m-Xylene	106	ug/L	2	SW8260B	06/26/13 12:28	WAT		2
o-Xylene	53	ug/L	1	SW8260B	06/26/13 12:28	WAT	95-47-6	2
Styrene	55	ug/L	1	SW8260B	06/26/13 12:28	WAT	100-42-5	2

1-Sample spiked at 51 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S56868.04 (continued)
Sample Tag: MW-12-06 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	55	ug/L	1	SW8260B	06/26/13 12:28	WAT	98-82-8	1
Bromoform	56	ug/L	1	SW8260B	06/26/13 12:28	WAT	75-25-2	1
1,3-Dichlorobenzene	55	ug/L	1	SW8260B	06/26/13 12:28	WAT	541-73-1	1
1,4-Dichlorobenzene	55	ug/L	1	SW8260B	06/26/13 12:28	WAT	106-46-7	1
1,2-Dichlorobenzene	57	ug/L	1	SW8260B	06/26/13 12:28	WAT	95-50-1	1
1,2,4-Trichlorobenzene	74	ug/L	1	SW8260B	06/26/13 12:28	WAT	120-82-1	1
1,2-Dibromoethane	61	ug/L	1	SW8260B	06/26/13 12:28	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	73	ug/L	1	SW8260B	06/26/13 12:28	WAT	96-12-8	1

1-Spiked at 50ug/l

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74275

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B006447.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joe Ramsdell
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1,4-Dioxane SIM						Special Instructions
56468.01	6/12/13	—	Trip Blank	L	2		X						X										
.021.031.04	6/12/13	0935	MW-12-06	GW	18	6	9	3					X	X		X	X							MS/MSD Collected

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Joe Ramsdell / Arcadis ☒ Sampler DATE: 6/12/13 TIME: 1835
RECEIVED BY: SIGNATURE/ORGANIZATION: Steve Stelter DATE: 6/12/13 TIME: 1835

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 6-13-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Faust DATE: 6-13-13 TIME: 1015

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: MSD DATE: 6-13-13 TIME: 845

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56869.01(01)
Generated on 07/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56869.01-S56869.02
Project: Lansing Plant 3 Project# B0064479.2013.00603
Collected Date: 06/12/2013
Submitted Date/Time: 06/13/2013 10:15
Sampled by: Steve Stelter
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56869.01	MW-05 (3)	Groundwater	06/12/2013 10:40
S56869.02	Trip Blank	Liquid	06/12/2013 08:05

Analytical Laboratory Report

Lab Sample ID: S56869.01
Sample Tag: MW-05 (3)
Collected Date/Time: 06/12/2013 10:40
Matrix: Groundwater
COC Reference: 80886

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:20	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 13:36	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	07/08/13 13:36	PER	7440-38-2	
Barium	0.086	mg/L	0.010	SW6020	07/08/13 13:36	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	07/08/13 13:36	PER	7440-42-8	
Cadmium	0.0024	mg/L	0.0010	SW6020	07/08/13 13:36	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 13:36	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 13:36	PER	7440-48-4	
Copper	0.004	mg/L	0.002	SW6020	07/08/13 13:36	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 13:36	PER	7439-92-1	
Manganese	0.021	mg/L	0.010	SW6020	07/08/13 13:36	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:41	CCM	7439-97-6	
Nickel	0.043	mg/L	0.010	SW6020	07/08/13 13:36	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 13:36	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 13:36	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 13:36	PER	7440-62-2	
Zinc	0.020	mg/L	0.010	SW6020	07/08/13 13:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	91-58-7	

Lab Sample ID: S56869.01 (continued)
Sample Tag: MW-05 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 02:55	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 02:55	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	06/28/13 02:55	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/28/13 02:55	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 02:55	PL	118-74-1	

Lab Sample ID: S56869.01 (continued)
Sample Tag: MW-05 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 20:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 04:25	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 04:25	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 04:25	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 04:25	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 04:25	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 04:25	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	120-82-1	

Lab Sample ID: S56869.01 (continued)
Sample Tag: MW-05 (3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 04:25	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56869.02
Sample Tag: Trip Blank
Collected Date/Time: 06/12/2013 08:05
Matrix: Liquid
COC Reference: 80886

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/17/13 13:25	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 04:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 04:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 04:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 04:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 04:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 04:46	WAT		

Lab Sample ID: S56869.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 04:46	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

80886

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: RANDY CHRISTENSEN
COMPANY: ARCADIS
ADDRESS: 10559 Citation DRive Su 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS:
QUOTE NO.: Task # 0603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Chasing Plant 3 B00644 (79) 2013 0603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stellar

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL 16C	TAL SVOC	TAL Metals (w/Hg)	1-4 Dioxane SIM
56869.01	6/12/13	1040	MW-05C (3)	GW	6	2	3	1					X	X	X	X
.02	6/12/13	0805	TRIP BLANK	L	1		1						X			

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 6/12/13	TIME 1900	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6/12/13	TIME 1900	
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6-13-13	TIME 845	

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 6-13-13	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6-13-13	TIME 1015	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL 4.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56870.01(01)
Generated on 07/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56870.01-S56870.05
Project: Lansing Plant Project# B0064479.2013.00603
Collected Date: 06/11/2013 - 06/12/2013
Submitted Date/Time: 06/13/2013 10:15
Sampled by: Joe Rumschlag
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56870.01	MW-12-01	Groundwater	06/11/2013 10:40
S56870.02	DUP-08	Groundwater	06/11/2013 00:01
S56870.03	MW-12-05	Groundwater	06/11/2013 18:10
S56870.04	MW-12-05 (5)	Groundwater	06/11/2013 18:11
S56870.05	EB-15	Liquid	06/12/2013 10:25

Analytical Laboratory Report

Lab Sample ID: S56870.01
Sample Tag: MW-12-01
Collected Date/Time: 06/11/2013 10:40
Matrix: Groundwater
COC Reference: 74276

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/20/13 16:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 14:00	PER	7440-36-0	
Arsenic	0.012	mg/L	0.002	SW6020	07/08/13 14:00	PER	7440-38-2	
Barium	0.069	mg/L	0.010	SW6020	07/08/13 14:00	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	07/08/13 14:00	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 14:00	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 14:00	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 14:00	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	07/08/13 14:00	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 14:00	PER	7439-92-1	
Manganese	0.068	mg/L	0.010	SW6020	07/08/13 14:00	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:43	CCM	7439-97-6	
Nickel	0.020	mg/L	0.010	SW6020	07/08/13 14:00	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 14:00	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 14:00	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 14:00	PER	7440-62-2	
Zinc	0.024	mg/L	0.010	SW6020	07/08/13 14:00	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	91-58-7	

Lab Sample ID: S56870.01 (continued)
Sample Tag: MW-12-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 03:24	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 03:24	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	06/28/13 03:24	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 03:24	PL	118-74-1	

Lab Sample ID: S56870.01 (continued)
Sample Tag: MW-12-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 21:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 05:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 05:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 05:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 05:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 05:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 05:06	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	120-82-1	

Lab Sample ID: S56870.01 (continued)
Sample Tag: MW-12-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 05:06	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56870.02
Sample Tag: DUP-08
Collected Date/Time: 06/11/2013 00:01
Matrix: Groundwater
COC Reference: 74276

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/20/13 16:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 14:01	PER	7440-36-0	
Arsenic	0.013	mg/L	0.002	SW6020	07/08/13 14:01	PER	7440-38-2	
Barium	0.070	mg/L	0.010	SW6020	07/08/13 14:01	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	07/08/13 14:01	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 14:01	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 14:01	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 14:01	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	07/08/13 14:01	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 14:01	PER	7439-92-1	
Manganese	0.067	mg/L	0.010	SW6020	07/08/13 14:01	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:57	CCM	7439-97-6	
Nickel	0.019	mg/L	0.010	SW6020	07/08/13 14:01	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 14:01	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 14:01	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 14:01	PER	7440-62-2	
Zinc	0.019	mg/L	0.010	SW6020	07/08/13 14:01	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	91-58-7	

Lab Sample ID: S56870.02 (continued)
Sample Tag: DUP-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 03:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 03:53	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	06/28/13 03:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/28/13 03:53	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 03:53	PL	118-74-1	

Lab Sample ID: S56870.02 (continued)
Sample Tag: DUP-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 21:40	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 05:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 05:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 05:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 05:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 05:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 05:27	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	120-82-1	

Lab Sample ID: S56870.02 (continued)
Sample Tag: DUP-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 05:27	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56870.03
Sample Tag: MW-12-05
Collected Date/Time: 06/11/2013 18:10
Matrix: Groundwater
COC Reference: 74276

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	4.6	IR
2	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 14:05	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 14:03	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 14:05	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	07/08/13 14:03	PER	7440-38-2	
Barium, Dissolved	0.030	mg/L	0.010	SW6020	07/08/13 14:05	PER	7440-39-3	
Barium	0.029	mg/L	0.010	SW6020	07/08/13 14:03	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	07/08/13 14:05	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020	07/08/13 14:03	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 14:05	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 14:03	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 14:05	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 14:03	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 14:05	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 14:03	PER	7440-48-4	
Copper, Dissolved	0.006	mg/L	0.002	SW6020	07/08/13 14:05	PER	7440-50-8	
Copper	0.012	mg/L	0.002	SW6020	07/08/13 14:03	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 14:05	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 14:03	PER	7439-92-1	
Manganese, Dissolved	0.099	mg/L	0.010	SW6020	07/08/13 14:05	PER	7439-96-5	
Manganese	0.100	mg/L	0.010	SW6020	07/08/13 14:03	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/14/13 15:01	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 14:59	CCM	7439-97-6	
Nickel, Dissolved	0.042	mg/L	0.010	SW6020	07/08/13 14:05	PER	7440-02-0	
Nickel	0.040	mg/L	0.010	SW6020	07/08/13 14:03	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 14:05	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 14:03	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 14:05	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 14:03	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 14:05	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 14:03	PER	7440-62-2	
Zinc, Dissolved	0.021	mg/L	0.010	SW6020	07/08/13 14:05	PER	7440-66-6	
Zinc	0.019	mg/L	0.010	SW6020	07/08/13 14:03	PER	7440-66-6	

Lab Sample ID: S56870.03 (continued)
Sample Tag: MW-12-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/28/13 04:23	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 04:23	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 04:23	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	06/28/13 04:23	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	88-75-5	

Lab Sample ID: S56870.03 (continued)
Sample Tag: MW-12-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 04:23	PL	118-74-1	

Analytical Laboratory Report

Lab Sample ID: S56870.04
Sample Tag: MW-12-05 (5)
Collected Date/Time: 06/11/2013 18:11
Matrix: Groundwater
COC Reference: 74276

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
Metals								
Antimony, Dissolved	0.003	mg/L	0.002	SW6020	07/08/13 14:07	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 14:07	PER	7440-38-2	
Barium, Dissolved	0.031	mg/L	0.010	SW6020	07/08/13 14:07	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	07/08/13 14:07	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 14:07	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 14:07	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 14:07	PER	7440-48-4	
Copper, Dissolved	0.008	mg/L	0.002	SW6020	07/08/13 14:07	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 14:07	PER	7439-92-1	
Manganese, Dissolved	0.103	mg/L	0.010	SW6020	07/08/13 14:07	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/14/13 15:03	CCM	7439-97-6	
Nickel, Dissolved	0.041	mg/L	0.010	SW6020	07/08/13 14:07	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 14:07	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 14:07	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 14:07	PER	7440-62-2	
Zinc, Dissolved	0.017	mg/L	0.010	SW6020	07/08/13 14:07	PER	7440-66-6	

Analytical Laboratory Report

Lab Sample ID: S56870.05
Sample Tag: EB-15
Collected Date/Time: 06/12/2013 10:25
Matrix: Liquid
COC Reference: 74276

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/14/13 11:45	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/25/13 11:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 14:09	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	07/08/13 14:09	PER	7440-38-2	
Barium	Not detected	mg/L	0.010	SW6020	07/08/13 14:09	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	07/08/13 14:09	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 14:09	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 14:09	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 14:09	PER	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	07/08/13 14:09	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 14:09	PER	7439-92-1	
Manganese	Not detected	mg/L	0.010	SW6020	07/08/13 14:09	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/14/13 15:05	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	07/08/13 14:09	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 14:09	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 14:09	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 14:09	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	07/08/13 14:09	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	91-58-7	

Lab Sample ID: S56870.05 (continued)
Sample Tag: EB-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 04:52	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 04:52	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	06/28/13 04:52	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	98-95-3	
di-n-Octyl phthalate	1	ug/L	1	SW8270C	06/28/13 04:52	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 04:52	PL	118-74-1	

Lab Sample ID: S56870.05 (continued)
Sample Tag: EB-15

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 05:47	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 05:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 05:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 05:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 05:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 05:47	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 05:47	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

74276

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com
QUOTE NO: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant Project#: B0064479.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joseph Ramschburg

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	PCBs	Metals (w/Hg)	1,4-Dioxane SIM	Dissolved Metals
56870.01	6/11/13	1040	MW-12-01	GW	6	2	3	1					X	X		X	X	
.02	6/11/13	—	DUP-08	GW	6	2	3	1					X	X		X	X	
.03	6/11/13	1810	MW-12-05	GW	7	2	3	2					X	X		X	X	X
.04	6/11/13	1811	MW-12-05 (5)	GW	1			1										X
.05	6/12/13	1025	EB-15	W	6	2	3	1					X	X		X		X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE 6-12-13	TIME 1650
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6/12/13	TIME 1650
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6-13-13	TIME 845

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 6-13-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 6-13-13	TIME 1015
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56898.01(01)
Generated on 07/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56898.01-S56898.02
Project: Lansing Plant 6 Project# B0064481.2013.
Collected Date: 06/13/2013
Submitted Date/Time: 06/13/2013 15:50
Sampled by: Steve Stelter
P.O. #: B0064481.2013.

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56898.01	MW-04-01(6)	Groundwater	06/13/2013 12:06
S56898.02	TRIP BLANK	Liquid	06/13/2013 08:30

Analytical Laboratory Report

Lab Sample ID: S56898.01
Sample Tag: MW-04-01(6)
Collected Date/Time: 06/13/2013 12:06
Matrix: Groundwater
COC Reference: 80884

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/18/13 12:10	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	06/20/13 16:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 14:50	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020	07/08/13 14:50	PER	7440-38-2	
Barium	0.144	mg/L	0.010	SW6020	07/08/13 14:50	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	07/08/13 14:50	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 14:50	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 14:50	PER	7440-47-3	
Cobalt	0.011	mg/L	0.010	SW6020	07/08/13 14:50	PER	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	07/08/13 14:50	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 14:50	PER	7439-92-1	
Manganese	0.441	mg/L	0.010	SW6020	07/08/13 14:50	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/18/13 16:10	CCM	7439-97-6	
Nickel	0.037	mg/L	0.010	SW6020	07/08/13 14:50	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 14:50	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 14:50	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 14:50	PER	7440-62-2	
Zinc	0.015	mg/L	0.010	SW6020	07/08/13 14:50	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	91-58-7	

Lab Sample ID: S56898.01 (continued)
Sample Tag: MW-04-01(6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 05:21	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 05:21	PL	84-66-2	
Dimethyl phthalate	2	ug/L	1	SW8270C	06/28/13 05:21	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 05:21	PL	118-74-1	

Lab Sample ID: S56898.01 (continued)
Sample Tag: MW-04-01(6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 22:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 06:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 06:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 06:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 06:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 06:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 06:08	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	120-82-1	

Lab Sample ID: S56898.01 (continued)
Sample Tag: MW-04-01(6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 06:08	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56898.02
Sample Tag: TRIP BLANK
Collected Date/Time: 06/13/2013 08:30
Matrix: Liquid
COC Reference: 80884

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/25/13 11:45	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 06:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 06:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 06:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 06:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 06:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 06:29	WAT		

Lab Sample ID: S56898.02 (continued)
Sample Tag: TRIP BLANK

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 06:29	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

80884

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: RANDY CHRISTENSEN
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810 225 1910 FAX NO.:
P.O. NO.: PO
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com
QUOTE NO.: TASK # 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: LANSING PLANT (6) PROJECT # B006446.2013. STEVE STETLER
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC	SVOC	Tot Metals (1-4-dioxane)									
56898.01	6/13	1206	MW-04-01 (6)	GW	6	2	3	1					X	X	X	X								
.02	6/13	0830	TRIP BLANK	L	1		1						X											

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] ☒ Sampler DATE: 6/13/13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Jim Stoppenger DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 6/13/13 TIME: 1550

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56899.01(01)
Generated on 07/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56899.01-S56899.02
Project: Lansing Plant B0064480.2013.00603
Collected Date: 06/13/2013
Submitted Date/Time: 06/13/2013 15:50
Sampled by: Joe Rumschlag
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56899.01	Trip Blank	Liquid	06/13/2013 00:01
S56899.02	CH-14-RO	Groundwater	06/13/2013 10:35

Analytical Laboratory Report

Lab Sample ID: S56899.01
Sample Tag: Trip Blank
Collected Date/Time: 06/13/2013 00:01
Matrix: Liquid
COC Reference: 80882

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/25/13 11:45	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 06:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 06:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 06:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 06:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 06:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 06:49	WAT		

Lab Sample ID: S56899.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 06:49	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56899.02
Sample Tag: CH-14-RO
Collected Date/Time: 06/13/2013 10:35
Matrix: Groundwater
COC Reference: 80882

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/18/13 12:10	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	06/20/13 16:00	WAT		
Inorganics								
Chromium VI	28.3	mg/L	0.1	3500-Cr B	06/13/13 17:34	MJC	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 14:51	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	07/08/13 14:51	PER	7440-38-2	
Barium	0.043	mg/L	0.010	SW6020	07/08/13 14:51	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	07/08/13 14:51	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 14:51	PER	7440-43-9	
Chromium	23.4	mg/L	0.010	SW6020	07/08/13 14:51	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 14:51	PER	7440-48-4	
Copper	0.009	mg/L	0.002	SW6020	07/08/13 14:51	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 14:51	PER	7439-92-1	
Manganese	0.010	mg/L	0.010	SW6020	07/08/13 14:51	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/18/13 16:06	CCM	7439-97-6	
Nickel	0.063	mg/L	0.010	SW6020	07/08/13 14:51	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 14:51	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 14:51	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	07/08/13 14:51	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	07/08/13 14:51	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	205-99-2	

Lab Sample ID: S56899.02 (continued)
Sample Tag: CH-14-RO

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 05:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 05:50	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	06/28/13 05:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/28/13 05:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	129-00-0	

Lab Sample ID: S56899.02 (continued)
Sample Tag: CH-14-RO

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 05:50	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/19/13 22:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 09:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 09:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 09:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 09:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 09:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 09:33	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	100-42-5	

Lab Sample ID: S56899.02 (continued)
Sample Tag: CH-14-RO

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 09:33	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

80882

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: RANDY Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-7910 FAX NO.: P.O. NO.: PO
E-MAIL ADDRESS: Randy.christensen@arcadis-us.com QUOTE NO.: Task# 00603

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant B0064490.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Joe Rumschlag

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	SVOCs	Metals	1,4-Dioxane SIMS	Hexavalent Chromium
58899.01	6/13/13	-	Trip Blank	L	2		X						X				
.02	6/13/13	1035	CH-14-RO	GW	6	2	3	1					X	X	X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Joseph Rumschlag / ARCADIS ☒ Sampler DATE: 6/13/13 TIME: 1420
RECEIVED BY: SIGNATURE/ORGANIZATION: Steve Steffe / PM / DATE: 6/13/13 TIME: 1420
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 6/13/13 TIME: 1650

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S56904.01(01)
Generated on 07/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56904.01-S56904.06
Project: Lansing Plant 6/B0064481.2013
Collected Date: 06/12/2013 - 06/13/2013
Submitted Date/Time: 06/13/2013 15:50
Sampled by: James Ness
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56904.01	TRIP BLANK	Liquid	06/12/2013 00:01
S56904.02	UNK-03	Groundwater	06/12/2013 16:30
S56904.03	MWBP-10A-USTI-4	Groundwater	06/12/2013 19:45
S56904.04	MWBP-10-USTI-4	Groundwater	06/12/2013 19:45
S56904.05	MWBP-11-USTI-4	Groundwater	06/13/2013 13:00
S56904.06	DUP-10	Groundwater	06/13/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S56904.01
Sample Tag: TRIP BLANK
Collected Date/Time: 06/12/2013 00:01
Matrix: Liquid
COC Reference: 80883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	06/25/13 11:46	WAT		
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 07:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 07:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 07:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 07:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 07:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 07:30	WAT		

Lab Sample ID: S56904.01 (continued)
Sample Tag: TRIP BLANK

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 07:30	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56904.02
Sample Tag: UNK-03
Collected Date/Time: 06/12/2013 16:30
Matrix: Groundwater
COC Reference: 80883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 14:13	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	07/08/13 14:13	PER	7440-38-2	
Barium	0.052	mg/L	0.010	SW6020	07/08/13 14:13	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	07/08/13 14:13	PER	7440-42-8	
Cadmium	0.0018	mg/L	0.0010	SW6020	07/08/13 14:13	PER	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 14:13	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 14:13	PER	7440-48-4	
Copper	0.007	mg/L	0.002	SW6020	07/08/13 14:13	PER	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 14:13	PER	7439-92-1	
Manganese	0.124	mg/L	0.010	SW6020	07/08/13 14:13	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/19/13 14:52	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	07/08/13 14:13	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 14:13	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 14:13	PER	7440-22-4	
Vanadium	0.006	mg/L	0.002	SW6020	07/08/13 14:13	PER	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	07/08/13 14:13	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/28/13 06:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	91-58-7	

Lab Sample ID: S56904.02 (continued)
Sample Tag: UNK-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 06:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 06:20	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	06/28/13 06:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/28/13 06:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 06:20	PL	118-74-1	

Lab Sample ID: S56904.02 (continued)
Sample Tag: UNK-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/21/13 20:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 07:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 07:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 07:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 07:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 07:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 07:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	120-82-1	

Lab Sample ID: S56904.02 (continued)
Sample Tag: UNK-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 07:51	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56904.03
Sample Tag: MWBP-10A-USTI-4
Collected Date/Time: 06/12/2013 19:45
Matrix: Groundwater
COC Reference: 80883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
Metal Digestion	Completed			3015A	07/08/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Metals								
Antimony, Dissolved	0.012	mg/L	0.002	SW6020	07/08/13 14:17	PER	7440-36-0	
Antimony	0.010	mg/L	0.002	SW6020	07/08/13 14:15	PER	7440-36-0	
Arsenic, Dissolved	0.026	mg/L	0.002	SW6020	07/08/13 14:17	PER	7440-38-2	
Arsenic	0.028	mg/L	0.002	SW6020	07/08/13 14:15	PER	7440-38-2	
Barium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 14:17	PER	7440-39-3	
Barium	0.016	mg/L	0.010	SW6020	07/08/13 14:15	PER	7440-39-3	
Boron, Dissolved	0.09	mg/L	0.04	SW6020	07/08/13 14:17	PER	7440-42-8	
Boron	0.08	mg/L	0.04	SW6020	07/08/13 14:15	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 14:17	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 14:15	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 14:17	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 14:15	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 14:17	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 14:15	PER	7440-48-4	
Copper, Dissolved	0.002	mg/L	0.002	SW6020	07/08/13 14:17	PER	7440-50-8	
Copper	0.061	mg/L	0.002	SW6020	07/08/13 14:15	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 14:17	PER	7439-92-1	
Lead	0.032	mg/L	0.002	SW6020	07/08/13 14:15	PER	7439-92-1	
Manganese, Dissolved	0.011	mg/L	0.010	SW6020	07/08/13 14:17	PER	7439-96-5	
Manganese	0.045	mg/L	0.010	SW6020	07/08/13 14:15	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/19/13 14:40	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/19/13 14:38	CCM	7439-97-6	
Nickel, Dissolved	0.019	mg/L	0.010	SW6020	07/08/13 14:17	PER	7440-02-0	
Nickel	0.025	mg/L	0.010	SW6020	07/08/13 14:15	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 14:17	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 14:15	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 14:17	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 14:15	PER	7440-22-4	
Vanadium, Dissolved	0.024	mg/L	0.002	SW6020	07/08/13 14:17	PER	7440-62-2	
Vanadium	0.027	mg/L	0.002	SW6020	07/08/13 14:15	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 14:17	PER	7440-66-6	
Zinc	0.057	mg/L	0.010	SW6020	07/08/13 14:15	PER	7440-66-6	

Lab Sample ID: S56904.03 (continued)
Sample Tag: MWBP-10A-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/28/13 06:49	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 06:49	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 06:49	PL	84-66-2	
Dimethyl phthalate	9	ug/L	1	SW8270C	06/28/13 06:49	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/28/13 06:49	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	88-75-5	

Lab Sample ID: S56904.03 (continued)
Sample Tag: MWBP-10A-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	86-30-6	
Naphthalene	2	ug/L	1	SW8270C	06/28/13 06:49	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 06:49	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/21/13 20:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 08:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 08:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 08:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 08:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 08:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-27-4	
Methyl cyclohexane	25	ug/L	1	SW8260B	06/19/13 08:52	WAT	108-87-2	

Lab Sample ID: S56904.03 (continued)
Sample Tag: MWBP-10A-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	10061-01-5	
Toluene	1	ug/L	1	SW8260B	06/19/13 08:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	79-34-5	
Ethylbenzene	12	ug/L	1	SW8260B	06/19/13 08:52	WAT	100-41-4	
p,m-Xylene	22	ug/L	2	SW8260B	06/19/13 08:52	WAT		
o-Xylene	1	ug/L	1	SW8260B	06/19/13 08:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	100-42-5	
Isopropylbenzene	3	ug/L	1	SW8260B	06/19/13 08:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 08:52	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56904.04
Sample Tag: MWBP-10-USTI-4
Collected Date/Time: 06/12/2013 19:45
Matrix: Groundwater
COC Reference: 80883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:30	PER		
Metal Digestion	Completed			3015A	07/08/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 15:05	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 15:04	PER	7440-36-0	
Arsenic, Dissolved	0.037	mg/L	0.002	SW6020	07/08/13 15:05	PER	7440-38-2	
Arsenic	0.037	mg/L	0.002	SW6020	07/08/13 15:04	PER	7440-38-2	
Barium, Dissolved	0.077	mg/L	0.010	SW6020	07/08/13 15:05	PER	7440-39-3	
Barium	0.081	mg/L	0.010	SW6020	07/08/13 15:04	PER	7440-39-3	
Boron, Dissolved	0.08	mg/L	0.04	SW6020	07/08/13 15:05	PER	7440-42-8	
Boron	0.08	mg/L	0.04	SW6020	07/08/13 15:04	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 15:05	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 15:04	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:05	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 15:04	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:05	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 15:04	PER	7440-48-4	
Copper, Dissolved	0.004	mg/L	0.002	SW6020	07/08/13 15:05	PER	7440-50-8	
Copper	0.006	mg/L	0.002	SW6020	07/08/13 15:04	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 15:05	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	07/08/13 15:04	PER	7439-92-1	
Manganese, Dissolved	0.067	mg/L	0.010	SW6020	07/08/13 15:05	PER	7439-96-5	
Manganese	0.072	mg/L	0.010	SW6020	07/08/13 15:04	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/19/13 14:44	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/19/13 14:42	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:05	PER	7440-02-0	
Nickel	Not detected	mg/L	0.010	SW6020	07/08/13 15:04	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 15:05	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 15:04	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 15:05	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 15:04	PER	7440-22-4	
Vanadium, Dissolved	0.031	mg/L	0.002	SW6020	07/08/13 15:05	PER	7440-62-2	
Vanadium	0.034	mg/L	0.002	SW6020	07/08/13 15:04	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:05	PER	7440-66-6	
Zinc	Not detected	mg/L	0.010	SW6020	07/08/13 15:04	PER	7440-66-6	

Lab Sample ID: S56904.04 (continued)
Sample Tag: MWBP-10-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	06/28/13 07:18	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 07:18	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 07:18	PL	84-66-2	
Dimethyl phthalate	9	ug/L	1	SW8270C	06/28/13 07:18	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	06/28/13 07:18	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	88-75-5	

Lab Sample ID: S56904.04 (continued)
Sample Tag: MWBP-10-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 07:18	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/21/13 20:45	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 09:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 09:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 09:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 09:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 09:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-27-4	
Methyl cyclohexane	2	ug/L	1	SW8260B	06/19/13 09:13	WAT	108-87-2	

Lab Sample ID: S56904.04 (continued)
Sample Tag: MWBP-10-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	06/19/13 09:13	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 09:13	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56904.05
Sample Tag: MWBP-11-USTI-4
Collected Date/Time: 06/13/2013 13:00
Matrix: Groundwater
COC Reference: 80883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:30	PER		
Metal Digestion	Completed			3015A	07/08/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:40	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 15:09	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 15:07	PER	7440-36-0	
Arsenic, Dissolved	0.018	mg/L	0.002	SW6020	07/08/13 15:09	PER	7440-38-2	
Arsenic	0.019	mg/L	0.002	SW6020	07/08/13 15:07	PER	7440-38-2	
Barium, Dissolved	0.017	mg/L	0.010	SW6020	07/08/13 15:09	PER	7440-39-3	
Barium	0.022	mg/L	0.010	SW6020	07/08/13 15:07	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	07/08/13 15:09	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	07/08/13 15:07	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 15:09	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 15:07	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:09	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 15:07	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:09	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 15:07	PER	7440-48-4	
Copper, Dissolved	0.003	mg/L	0.002	SW6020	07/08/13 15:09	PER	7440-50-8	
Copper	0.011	mg/L	0.002	SW6020	07/08/13 15:07	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 15:09	PER	7439-92-1	
Lead	0.003	mg/L	0.002	SW6020	07/08/13 15:07	PER	7439-92-1	
Manganese, Dissolved	0.014	mg/L	0.010	SW6020	07/08/13 15:09	PER	7439-96-5	
Manganese	0.040	mg/L	0.010	SW6020	07/08/13 15:07	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/19/13 14:48	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/19/13 14:46	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:09	PER	7440-02-0	
Nickel	Not detected	mg/L	0.010	SW6020	07/08/13 15:07	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 15:09	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 15:07	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 15:09	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 15:07	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 15:09	PER	7440-62-2	
Vanadium	0.003	mg/L	0.002	SW6020	07/08/13 15:07	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:09	PER	7440-66-6	
Zinc	Not detected	mg/L	0.010	SW6020	07/08/13 15:07	PER	7440-66-6	

Lab Sample ID: S56904.05 (continued)
Sample Tag: MWBP-11-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	2	ug/L	1	SW8270C	06/28/13 07:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 07:47	PL	53-70-3	
Dibenzofuran	1	ug/L	1	SW8270C	06/28/13 07:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 07:47	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	06/28/13 07:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/28/13 07:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	88-75-5	

Lab Sample ID: S56904.05 (continued)
Sample Tag: MWBP-11-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	86-30-6	
Naphthalene	1	ug/L	1	SW8270C	06/28/13 07:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	87-86-5	
Phenanthrene	3	ug/L	1	SW8270C	06/28/13 07:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 07:47	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/21/13 21:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 08:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 08:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 08:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 08:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 08:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	108-87-2	

Lab Sample ID: S56904.05 (continued)
Sample Tag: MWBP-11-USTI-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	10061-01-5	
Toluene	1	ug/L	1	SW8260B	06/19/13 08:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	100-41-4	
p,m-Xylene	3	ug/L	2	SW8260B	06/19/13 08:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 08:11	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S56904.06
Sample Tag: DUP-10
Collected Date/Time: 06/13/2013 00:01
Matrix: Groundwater
COC Reference: 80883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	06/18/13 23:41	EMR		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	06/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	07/08/13 10:30	PER		
Metal Digestion	Completed			3015A	07/08/13 10:30	PER		
pH check for VOCs	<2	STD Units		N/A	06/24/13 10:50	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 15:13	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	07/08/13 15:11	PER	7440-36-0	
Arsenic, Dissolved	0.017	mg/L	0.002	SW6020	07/08/13 15:13	PER	7440-38-2	
Arsenic	0.018	mg/L	0.002	SW6020	07/08/13 15:11	PER	7440-38-2	
Barium, Dissolved	0.013	mg/L	0.010	SW6020	07/08/13 15:13	PER	7440-39-3	
Barium	0.019	mg/L	0.010	SW6020	07/08/13 15:11	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	07/08/13 15:13	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	07/08/13 15:11	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	07/08/13 15:13	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0010	SW6020	07/08/13 15:11	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:13	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	07/08/13 15:11	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:13	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	07/08/13 15:11	PER	7440-48-4	
Copper, Dissolved	0.002	mg/L	0.002	SW6020	07/08/13 15:13	PER	7440-50-8	
Copper	0.011	mg/L	0.002	SW6020	07/08/13 15:11	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 15:13	PER	7439-92-1	
Lead	0.003	mg/L	0.002	SW6020	07/08/13 15:11	PER	7439-92-1	
Manganese, Dissolved	0.014	mg/L	0.010	SW6020	07/08/13 15:13	PER	7439-96-5	
Manganese	0.041	mg/L	0.010	SW6020	07/08/13 15:11	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	06/19/13 15:02	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	06/19/13 14:50	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:13	PER	7440-02-0	
Nickel	Not detected	mg/L	0.010	SW6020	07/08/13 15:11	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	07/08/13 15:13	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	07/08/13 15:11	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	07/08/13 15:13	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	07/08/13 15:11	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	07/08/13 15:13	PER	7440-62-2	
Vanadium	0.003	mg/L	0.002	SW6020	07/08/13 15:11	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	07/08/13 15:13	PER	7440-66-6	
Zinc	Not detected	mg/L	0.010	SW6020	07/08/13 15:11	PER	7440-66-6	

Lab Sample ID: S56904.06 (continued)
Sample Tag: DUP-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	2	ug/L	1	SW8270C	06/28/13 08:17	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	06/28/13 08:17	PL	53-70-3	
Dibenzofuran	1	ug/L	1	SW8270C	06/28/13 08:17	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	06/28/13 08:17	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	06/28/13 08:17	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	06/28/13 08:17	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	88-75-5	

Lab Sample ID: S56904.06 (continued)
Sample Tag: DUP-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	86-30-6	
Naphthalene	1	ug/L	1	SW8270C	06/28/13 08:17	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	87-86-5	
Phenanthrene	3	ug/L	1	SW8270C	06/28/13 08:17	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	06/28/13 08:17	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	06/21/13 21:29	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	06/19/13 08:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	06/19/13 08:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	06/19/13 08:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	06/19/13 08:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	06/19/13 08:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	108-87-2	

Lab Sample ID: S56904.06 (continued)
Sample Tag: DUP-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	100-41-4	
p,m-Xylene	3	ug/L	2	SW8260B	06/19/13 08:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	06/19/13 08:32	WAT	96-12-8	

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C.O.C. PAGE # 1 OF _____

80883

CHAIN OF CUSTODY RECORD

REPORT TO

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INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 / B00644816.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: James Ness

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other _____

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	MI VOC 8260	5 VOCs	Total Metals	Total Dissolved Metals	1,4-Dioxane SIM	Special Instructions
56904.01	—	—	TRIP BLANK	L	2		2						X				X JN	No 1,4 Dioxane SIM
.02	6/12/13	1630	UNK-03 (~~06122013~~) JN	GW	6	2	3	1					X	X	X	X	X	No Dissolved
.03	6/12/13	1945	MWBP-10A-UST1-4 (~~06122013~~) JN	GW	7	2	3	2					X	X	X	X	X	
.04	6/12/13	1945	MWBP-10-UST1-4 (~~06122013~~) JN	GW	7	2	3	2					X	X	X	X	X	
.05	6/13/13	1300	MWBP-11-UST1-4	GW	7	2	3	2					X	X	X	X	X	6/13/13
.06	—	—	DUP-10	GW	7	2	3	2					X	X	X	X	X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		6/13/12	1421
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tabatha Fant	DATE 6/13/13	TIME 1550

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57419.01(01)
Generated on 07/30/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57419.01
Project: B0064480.2013.00106/ RACER Plant 2
Collected Date: 07/29/2013
Submitted Date/Time: 07/29/2013 16:08
Sampled by: Austin Westhmis
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57419.01	VAP-P2-JU88 (77-82)	Groundwater	07/29/2013 15:20

Analytical Laboratory Report

Lab Sample ID: S57419.01
Sample Tag: VAP-P2-JU88 (77-82)
Collected Date/Time: 07/29/2013 15:20
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
4	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	07/30/13 11:25	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	07/29/13 16:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	76-13-1	
Acetone	46	ug/L	10	SW8260B	07/29/13 16:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/29/13 16:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/29/13 16:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/29/13 16:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/29/13 16:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	56-23-5	
Benzene	7	ug/L	1	SW8260B	07/29/13 16:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	10061-01-5	
Toluene	2	ug/L	1	SW8260B	07/29/13 16:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	79-34-5	

Lab Sample ID: S57419.01 (continued)
Sample Tag: VAP-P2-JU88 (77-82)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/29/13 16:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	96-12-8	

ARCADIS
Infrastructure Water Environment Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr. Ste. 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing Plant 2	Project #: B006447.9.2613.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TCL VOC 1,4-dioxane SIM							
						B		3	1								
57419.01 VAP-P2-JU88(77-82)	7/29/13	1520		✓	W	✓											

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
Real time 24 hour results needed

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements: Real time 24 hour results	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.0	Date/Time: 7/29/13 1608	Date/Time:	Date/Time:	Date/Time: 7/29/13 1608

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S57429.01(01)
Generated on 07/31/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57429.01
Project: B0064479.2013.00106/ RACER Plant 2
Collected Date: 07/30/2013
Submitted Date/Time: 07/30/2013 15:00
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57429.01	VAP-P2-JO68 (71-76)	Water	07/30/2013 12:30

Analytical Laboratory Report

Lab Sample ID: S57429.01
Sample Tag: VAP-P2-JO68 (71-76)
Collected Date/Time: 07/30/2013 12:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	07/30/13 10:32	WAT		
Organics - Volatiles								
1,4-Dioxane	121	ug/L	5	SW8260B - SIM	07/30/13 15:53	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	07/30/13 16:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/30/13 16:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/30/13 16:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/30/13 16:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/30/13 16:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	79-34-5	

Lab Sample ID: S57429.01 (continued)
Sample Tag: VAP-P2-JO68 (71-76)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/30/13 16:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/30/13 16:10	WAT	96-12-8	

ARCADIS
Infrastructure · Water · Environment · Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr. Ste. 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing Plant 2	Project #: B006479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B
Filtered (✓)	
# of Containers	3
Container Information	1

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC	1,4-dioxane SIM	REMARKS
57429.01 VAP-P2-J068(71-76)	7/30/13	1230		✓	W	✓		

Special Instructions/Comments:
Real Time 24 hour results needed

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name: Isaak Mwshak	Printed Name: Isaak Mwshak	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Real time 24 hour results	Sample Receipt:	Firm: ARCADIS	Firm/Courier: Merit	Firm/Courier: Merit	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.1.5	Date/Time: 7/30/13 1425	Date/Time: 7/30/13 1425	Date/Time: 7/30/13 1459	Date/Time: 7/30/13 1500

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by ARCADIS

Analytical Laboratory Report

Supplemental Report

Report ID: S57419.01(02)
Generated on 07/31/2013
Replaces report S57419.01(01) generated on 07/30/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57419.01
Project: B0064480.2013.00106/ RACER Plant 2
Collected Date: 07/29/2013
Submitted Date/Time: 07/29/2013 16:08
Sampled by: Austin Westhmis
P.O. #: B0064480.2013.00106

Re-analyzed sample per client request

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57419.01	VAP-P2-JU88 (77-82)	Groundwater	07/29/2013 15:20

Lab Sample ID: S57419.01
Sample Tag: VAP-P2-JU88 (77-82)
Collected Date/Time: 07/29/2013 15:20
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
4	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	07/30/13 11:25	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	07/29/13 16:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	76-13-1	
Acetone	46	ug/L	10	SW8260B	07/29/13 16:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/29/13 16:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/29/13 16:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/29/13 16:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/29/13 16:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	56-23-5	
Benzene	7	ug/L	1	SW8260B	07/29/13 16:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	10061-01-5	
Toluene	2	ug/L	1	SW8260B	07/29/13 16:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	79-34-5	

Lab Sample ID: S57419.01 (continued)
Sample Tag: VAP-P2-JU88 (77-82)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/29/13 16:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/29/13 16:53	WAT	96-12-8	
TCL Volatile Organics 8260 (Replicate 01)								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	76-13-1	
Acetone	46	ug/L	10	SW8260B	07/30/13 22:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/30/13 22:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/30/13 22:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/30/13 22:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/30/13 22:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	56-23-5	
Benzene	8	ug/L	1	SW8260B	07/30/13 22:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	10061-01-5	
Toluene	2	ug/L	1	SW8260B	07/30/13 22:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	124-48-1	

Lab Sample ID: S57419.01 (continued)
Sample Tag: VAP-P2-JU88 (77-82)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (Replicate 01) (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/30/13 22:46	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/30/13 22:46	WAT	96-12-8	

ARCADIS
Infrastructure Water Environment Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr. Ste. 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing Plant 2	Project #: B006447.9.2613.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TCL VOC 1,4-dioxane SIM							
						B		3	1								
57419.01 VAP-P2-JU88(77-82)	7/29/13	1520		✓	W	✓											

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
Real time 24 hour results needed

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements: Real time 24 hour results	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.0	Date/Time: 7/29/13 1608	Date/Time:	Date/Time:	Date/Time: 7/29/13 1608

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S57438.01(01)
Generated on 08/01/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57438.01
Project: B0064480.2013.00106/ RACER Lansing Plant 2
Collected Date: 07/30/2013
Submitted Date/Time: 07/31/2013 13:00
Sampled by: Austin Westhmis
P.O. #: B0064480.2013.00106

Report Notes

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Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57438.01	VAP-P3-IS63 (66-71)	Water	07/30/2013 09:00

Analytical Laboratory Report

Lab Sample ID: S57438.01
Sample Tag: VAP-P3-IS63 (66-71)
Collected Date/Time: 07/30/2013 09:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/01/13 10:30	WAT		
Organics - Volatiles								
1,4-Dioxane	136	ug/L	5	SW8260B - SIM	07/31/13 15:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	07/31/13 15:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/31/13 15:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/31/13 15:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/31/13 15:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/31/13 15:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	79-34-5	

Lab Sample ID: S57438.01 (continued)
Sample Tag: VAP-P3-IS63 (66-71)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/31/13 15:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/31/13 15:29	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr. Ste. 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing Plant 2	Project #: B0064480.2013.001006
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TCL VOC 1,4-dioxane SIM	PARAMETER ANALYSIS & METHOD
57438.01 VAP-P3-I563(66-71)	7/30/13	0900		✓	W	B		3	1	✓	

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore *
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
* Real time 24 hour results needed *

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name: Tim Glass	Printed Name: Tim Glass	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements: * Real time 24 hour results	Sample Receipt:	Firm: ARCADIS	Firm/Courier: Merit	Firm/Courier: Merit	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.0	Date/Time: 7/30/13 1055	Date/Time: 7.31.13 1055	Date/Time: 7-31-13	Date/Time: 7/31/13 1300

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S57452.01(01)
Generated on 08/02/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57452.01
Project: B0064479.2013.00106/ RACER Lansing Plant 2
Collected Date: 08/01/2013
Submitted Date/Time: 08/01/2013 12:56
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57452.01	VAP-P2-JN55 (67-72)	Water	08/01/2013 11:10

Analytical Laboratory Report

Lab Sample ID: S57452.01
Sample Tag: VAP-P2-JN55 (67-72)
Collected Date/Time: 08/01/2013 11:10
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/02/13 10:46	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/01/13 14:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/01/13 15:00	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/01/13 15:00	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/01/13 15:00	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/01/13 15:00	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/01/13 15:00	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	79-34-5	

Lab Sample ID: S57452.01 (continued)
Sample Tag: VAP-P2-JN55 (67-72)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/01/13 15:00	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/01/13 15:00	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10539 Citation Dr. Ste. 100	Fax: 810-229-8837
City: Brighton State: MI Zip: 48166	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing Plant 2	Project #: B0064479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil, W - Water, SL - Sludge, SW - Sample Wipe, T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: TCL VOC + 1,4-dioxane SIM	REMARKS
57452.01 VAP-P2-JN55(67-72)	8/1/13	1110		✓	W	B		3	1	✓	

Special Instructions/Comments:
Real time 24 hour results needed

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name: Andrea Ball	Printed Name:	Printed Name:
☒ Cooler packed with ice (✓)		Signature:	Signature: Andrea Ball	Signature:	Signature:
Specify Turnaround Requirements: Real time 24 hour results	Sample Receipt: Condition/Cooler Temp: 5.6	Firm: ARCADIS	Firm/Courier: Merit	Firm/Courier:	Firm:
Shipping Tracking #:		Date/Time: 8/1/13 1256	Date/Time: 01 Aug 13	Date/Time:	Date/Time:

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S57496.01(01)
Generated on 08/05/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57496.01
Project: B0064479.2013.00106/ RACER Lansing Plant 2
Collected Date: 08/02/2013
Submitted Date/Time: 08/02/2013 15:35
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57496.01	VAP-P2-KH71 (70-75)	Water	08/02/2013 14:45

Analytical Laboratory Report

Lab Sample ID: S57496.01
Sample Tag: VAP-P2-KH71 (70-75)
Collected Date/Time: 08/02/2013 14:45
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/05/13 14:07	JGH		
Organics - Volatiles								
1,4-Dioxane	16	ug/L	5	SW8260B - SIM	08/02/13 16:42	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/05/13 13:44	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/05/13 13:44	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/05/13 13:44	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/05/13 13:44	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/05/13 13:44	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	79-34-5	

Lab Sample ID: S57496.01 (continued)
Sample Tag: VAP-P2-KH71 (70-75)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/05/13 13:44	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/05/13 13:44	JGH	96-12-8	

ARCADIS
Infrastructure · Water · Environment · Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr. Ste. 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing Plant 2	Project #: B0064479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B												
Filtered (✓)													
# of Containers	3												
Container Information	1												

PARAMETER ANALYSIS & METHOD

57496 Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC 1,4-dioxane Sim
01 VAP-P2-KH71(70-75)	8/1/13	1445		✓	W	✓

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
Real time 24-hour results needed

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Barbara Ball
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature: Barbara Ball
Specify Turnaround Requirements: Real time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.7	Date/Time: 8/2/13 1530	Date/Time:	Date/Time:	Date/Time: 8/2/13 15:35

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S57506.01(01)
Generated on 08/06/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57506.01
Project: B0064479.2013/ RACER Plant 2
Collected Date: 08/05/2013
Submitted Date/Time: 08/05/2013 15:20
Sampled by: Christine Snyder
P.O. #: B0064479.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57506.01	VAP-P2-KL90 (71-75)	Groundwater	08/05/2013 14:45

Analytical Laboratory Report

Lab Sample ID: S57506.01
Sample Tag: VAP-P2-KL90 (71-75)
Collected Date/Time: 08/05/2013 14:45
Matrix: Groundwater
COC Reference: 75071

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
4	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/06/13 10:32	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/06/13 14:33	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/05/13 18:04	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/05/13 18:04	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/05/13 18:04	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/05/13 18:04	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/05/13 18:04	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	79-34-5	

Lab Sample ID: S57506.01 (continued)
Sample Tag: VAP-P2-KL90 (71-75)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/05/13 18:04	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/05/13 18:04	JGH	96-12-8	

Merit Laboratories, Inc.
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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75071

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Ste 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.:
E-MAIL ADDRESS: Randy.christensen@arcadis-us.com
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B006447.9.2013 / RAILER Plant 2
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Christine Snyder Christine Snyder
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER True 24hr Turn
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	1,4 Dioxane	VOCs
S7506.01	8-5-13	1445	~~VAP~~-P2-KL9D (71-75)	GW	4		4						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Christine Snyder / ARCADIS ☒ Sampler DATE: 8-5-13 TIME: 1520
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 8/5/13 TIME: 1530

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57515.01(01)
Generated on 08/07/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57515.01
Project: B0064479.2013/ RACER Plant 2
Collected Date: 08/06/2013
Submitted Date/Time: 08/06/2013 13:05
Sampled by: Christine Snyder
P.O. #: B0064479.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57515.01	VAP-P2-KV73 (68-72)	Groundwater	08/06/2013 12:30

Analytical Laboratory Report

Lab Sample ID: S57515.01
Sample Tag: VAP-P2-KV73 (68-72)
Collected Date/Time: 08/06/2013 12:30
Matrix: Groundwater
COC Reference: 82035

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/07/13 10:35	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/06/13 15:01	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/06/13 14:51	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/06/13 14:51	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/06/13 14:51	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/06/13 14:51	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/06/13 14:51	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	56-23-5	
Benzene	1	ug/L	1	SW8260B	08/06/13 14:51	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	10061-01-5	
Toluene	1	ug/L	1	SW8260B	08/06/13 14:51	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	79-34-5	

Lab Sample ID: S57515.01 (continued)
Sample Tag: VAP-P2-KV73 (68-72)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/06/13 14:51	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/06/13 14:51	JGH	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

82035

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Ste 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064479.2013 / RALER Plant 2
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Christine Snyder / Christine Snyder
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER True 24hr turn
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC	1,4 Dioxane SIM
57515.01	8-6-13	1230	VAP-P2-KV73 (68-72)	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Christine Snyder/ARCADIS ☒ Sampler DATE: 8-6-13 TIME: 1305
RECEIVED BY: SIGNATURE/ORGANIZATION: Barbara Ball DATE: 8/6/13 TIME: 13:05

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 2.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57527.01(01)
Generated on 08/08/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57527.01-S57527.02
Project: B0064479.2013/ RACER Plant 2
Collected Date: 08/07/2013
Submitted Date/Time: 08/07/2013 15:00
Sampled by: Christine Snyder
P.O. #: B0064479.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57527.01	VAP-P2-KK56 (56-60)	Groundwater	08/07/2013 12:00
S57527.02	VAP-P2-KK56 (70-72)	Groundwater	08/07/2013 14:25

Analytical Laboratory Report

Lab Sample ID: S57527.01
Sample Tag: VAP-P2-KK56 (56-60)
Collected Date/Time: 08/07/2013 12:00
Matrix: Groundwater
COC Reference: 74652

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/08/13 10:26	LBR		
Organics - Volatiles								
1,4-Dioxane	12	ug/L	5	SW8260B - SIM	08/07/13 16:02	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/07/13 16:19	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/07/13 16:19	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/07/13 16:19	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/07/13 16:19	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/07/13 16:19	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	79-34-5	

Lab Sample ID: S57527.01 (continued)
Sample Tag: VAP-P2-KK56 (56-60)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/07/13 16:19	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/07/13 16:19	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57527.02
Sample Tag: VAP-P2-KK56 (70-72)
Collected Date/Time: 08/07/2013 14:25
Matrix: Groundwater
COC Reference: 74652

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/08/13 10:27	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/07/13 16:20	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/07/13 16:40	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/07/13 16:40	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/07/13 16:40	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/07/13 16:40	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/07/13 16:40	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	79-34-5	

Lab Sample ID: S57527.02 (continued)
Sample Tag: VAP-P2-KK56 (70-72)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/07/13 16:40	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/07/13 16:40	JGH	96-12-8	

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74652

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: B006479.2013 / RACER Plant 2
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Christine Snyder / Christine Snyder
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER true 24 Turn
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC	1,4 Dioxane SIMS
57527.01	8-7-13	1200	VAP-P2-KK56 (56-60)	GW	3		3						X	X
.02	8-7-13	1425	VAP-P2-KK56 (70-72)	GW	5		5						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Christine Snyder / ARCADIS ☒ Sampler DATE: 8-7-13 TIME: 1500
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Fant DATE: 8/7/13 TIME: 1500

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57550.01(01)
Generated on 08/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57550.01-S57550.02
Project: B0064479.2013/ RACER Plant 2
Collected Date: 08/08/2013
Submitted Date/Time: 08/08/2013 15:35
Sampled by: Adam Richmond
P.O. #: B0064479.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57550.01	VAP-P2-KW91 (62-67)	Groundwater	08/08/2013 11:30
S57550.02	VAP-P2-KW91 (79-82)	Groundwater	08/08/2013 14:15

Analytical Laboratory Report

Lab Sample ID: S57550.01
Sample Tag: VAP-P2-KW91 (62-67)
Collected Date/Time: 08/08/2013 11:30
Matrix: Groundwater
COC Reference: 74653

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/09/13 10:41	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/08/13 16:53	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/08/13 20:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/08/13 20:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/08/13 20:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/08/13 20:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/08/13 20:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	79-34-5	

Lab Sample ID: S57550.01 (continued)
Sample Tag: VAP-P2-KW91 (62-67)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/08/13 20:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/08/13 20:52	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57550.02
Sample Tag: VAP-P2-KW91 (79-82)
Collected Date/Time: 08/08/2013 14:15
Matrix: Groundwater
COC Reference: 74653

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/09/13 10:46	LBR		
Organics - Volatiles								
1,4-Dioxane	18	ug/L	5	SW8260B - SIM	08/08/13 16:25	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/08/13 21:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/08/13 21:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/08/13 21:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/08/13 21:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/08/13 21:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	79-34-5	

Lab Sample ID: S57550.02 (continued)
Sample Tag: VAP-P2-KW91 (79-82)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/08/13 21:13	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/08/13 21:13	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

74653

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Ste. 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1948 | FAX NO. | P.O. NO.
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.

INVOICE TO

CONTACT NAME | ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | E-MAIL ADDRESS

PROJECT NO./NAME: B006944.79.2013 / RACER Plant 2
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Adam Richmond

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER 24 hr turn

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC	1,4 Dioxane SIMS
57550.01	8-8-13	1130	VAP-P2-KW91 (62-67)	GW	3		3						✓	✓
.02	8-8-13	1415	VAP-P2-KW91 (79-82)	GW	3		3						✓	✓

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Adam Richmond ☒ Sampler | DATE: 8/8/13 | TIME: 1420
RECEIVED BY: SIGNATURE/ORGANIZATION | DATE | TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION | DATE | TIME
RECEIVED BY: SIGNATURE/ORGANIZATION | DATE | TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION | DATE | TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust | DATE: 8/8/13 | TIME: 1535

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57553.01(01)
Generated on 08/09/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57553.01
Project: B0064479.2013/ RACER Plant 2
Collected Date: 08/09/2013
Submitted Date/Time: 08/09/2013 11:50
Sampled by: Adam Richmond
P.O. #: B0064479.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57553.01	VAP-P2-KV56 (70-72)	Groundwater	08/09/2013 11:00

Analytical Laboratory Report

Lab Sample ID: S57553.01
Sample Tag: VAP-P2-KV56 (70-72)
Collected Date/Time: 08/09/2013 11:00
Matrix: Groundwater
COC Reference: 75070

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/09/13 15:43	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/09/13 15:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/09/13 15:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/09/13 15:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/09/13 15:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/09/13 15:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/09/13 15:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	79-34-5	

Lab Sample ID: S57553.01 (continued)
Sample Tag: VAP-P2-KV56 (70-72)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/09/13 15:27	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/09/13 15:27	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75070

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Ste. 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO. | P.O. NO.
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.

INVOICE TO

CONTACT NAME | ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | E-MAIL ADDRESS

PROJECT NO./NAME: B0064479.2013 / RACER Plant 2
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Adam Richmond

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER 24 hr turn

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC	1,4 Dioxane SIMS
57553.01	8-9-13	1100	VAP-PZ-KV56 (70-72)	GW	3		3						✓	✓

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ARCADIS ☒ Sampler — DATE: 8/9/13 — TIME: 1130
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE: 8-9-13 — TIME: 1130

RELINQUISHED BY: SIGNATURE/ORGANIZATION: — DATE: 8-9-13 — TIME: 1150
RECEIVED BY: SIGNATURE/ORGANIZATION: Talitha Faust — DATE: 8-9-13 — TIME: 1150

RELINQUISHED BY: SIGNATURE/ORGANIZATION: — DATE — TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: — DATE — TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 5.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57476.01(01)
Generated on 08/05/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57476.01
Project: B0064479.2013.00106/ RACER Lansing Plant 2
Collected Date: 08/02/2013
Submitted Date/Time: 08/02/2013 09:35
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57476.01	VAP-P2-KH71 (65-70)	Water	08/02/2013 09:00

Analytical Laboratory Report

Lab Sample ID: S57476.01
Sample Tag: VAP-P2-KH71 (65-70)
Collected Date/Time: 08/02/2013 09:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/03/13 14:40	JGH		
Organics - Volatiles								
1,4-Dioxane	10	ug/L	5	SW8260B - SIM	08/02/13 16:24	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	76-13-1	
Acetone	18	ug/L	10	SW8260B	08/02/13 15:31	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/02/13 15:31	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/02/13 15:31	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/02/13 15:31	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/02/13 15:31	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	56-23-5	
Benzene	12	ug/L	1	SW8260B	08/02/13 15:31	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	10061-01-5	
Toluene	8	ug/L	1	SW8260B	08/02/13 15:31	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	79-34-5	

Lab Sample ID: S57476.01 (continued)
Sample Tag: VAP-P2-KH71 (65-70)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/02/13 15:31	JGH		
o-Xylene	1	ug/L	1	SW8260B	08/02/13 15:31	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/02/13 15:31	JGH	96-12-8	

ARCADIS
Infrastructure · Water · Environment · Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10554 Citation Dr. Ste. 100	Fax: 810-229-5837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing Plant 2	Project #: B006447.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B						
Filtered (✓)							
# of Containers	3						
Container Information	1						

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC	1,4-dioxane	Gas
57476.01 VAP-P2-KH71(65-70)	8/2/13	0900		✓	W			

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
★ Real time 24 hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Barbara Ball
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature: Barbara Ball
Specify Turnaround Requirements: ★ Real time 24 hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.0	Date/Time: 8/2/13 0935	Date/Time:	Date/Time:	Date/Time: 8/2/13 9:35

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58868.01(01)
Generated on 11/19/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58868.01-S58868.04
Project: Lansing Plant 2 Project#: B0064479.2013.
Collected Date: 11/06/2013
Submitted Date/Time: 11/07/2013 10:30
Sampled by: Cliff Walls
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58868.01	P2-SB-03 (116)	Groundwater	11/06/2013 09:30
S58868.02	P2-MW-04 (116)	Groundwater	11/06/2013 10:32
S58868.03	Trip Blank	Groundwater	11/06/2013 07:00
S58868.04	Equipment Blank - 1	Groundwater	11/06/2013 14:00

Analytical Laboratory Report

Lab Sample ID: S58868.01
Sample Tag: P2-SB-03 (116)
Collected Date/Time: 11/06/2013 09:30
Matrix: Groundwater
COC Reference: 77084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/12/13 14:22	EMR		
Mercury Digestion	Completed			SW7471B	11/08/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7440-36-0	
Arsenic	0.023	mg/L	0.002	SW6020A	11/18/13 17:21	PER	7440-38-2	
Barium	0.240	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020A	11/18/13 17:21	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:21	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 17:21	PER	7439-92-1	
Manganese	0.073	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/08/13 15:23	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:21	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 17:21	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	11/18/13 17:21	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	91-58-7	

Lab Sample ID: S58868.01 (continued)
Sample Tag: P2-SB-03 (116)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/15/13 19:18	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/15/13 19:18	PL	118-74-1	

Lab Sample ID: S58868.01 (continued)
Sample Tag: P2-SB-03 (116)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 19:08	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 18:40	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 18:40	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 18:40	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 18:40	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 18:40	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 18:40	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	120-82-1	

Lab Sample ID: S58868.01 (continued)
Sample Tag: P2-SB-03 (116)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:40	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58868.02
Sample Tag: P2-MW-04 (116)
Collected Date/Time: 11/06/2013 10:32
Matrix: Groundwater
COC Reference: 77084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/12/13 14:22	EMR		
Mercury Digestion	Completed			SW7471B	11/08/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020A	11/18/13 17:23	PER	7440-38-2	
Barium	0.276	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7440-39-3	
Boron	0.36	mg/L	0.04	SW6020A	11/18/13 17:23	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:23	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 17:23	PER	7439-92-1	
Manganese	0.142	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/08/13 15:37	CCM	7439-97-6	
Nickel	0.018	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7782-49-2	
Silver	0.0005	mg/L	0.0005	SW6020A	11/18/13 17:23	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 17:23	PER	7440-62-2	
Zinc	0.007	mg/L	0.005	SW6020A	11/18/13 17:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270D	11/15/13 19:51	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	91-58-7	

Lab Sample ID: S58868.02 (continued)
Sample Tag: P2-MW-04 (116)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/15/13 19:51	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/15/13 19:51	PL	118-74-1	

Lab Sample ID: S58868.02 (continued)
Sample Tag: P2-MW-04 (116)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	59	ug/L	5	SW8260B - SIM	11/08/13 19:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 19:00	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 19:00	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 19:00	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 19:00	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 19:00	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 19:00	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	120-82-1	

Lab Sample ID: S58868.02 (continued)
Sample Tag: P2-MW-04 (116)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:00	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58868.03
Sample Tag: Trip Blank
Collected Date/Time: 11/06/2013 07:00
Matrix: Groundwater
COC Reference: 77084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 19:45	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 19:20	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 19:20	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 19:20	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 19:20	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 19:20	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	79-34-5	

Lab Sample ID: S58868.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 19:20	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:20	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58868.04
Sample Tag: Equipment Blank - 1
Collected Date/Time: 11/06/2013 14:00
Matrix: Groundwater
COC Reference: 77084

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/12/13 14:22	EMR		
Mercury Digestion	Completed			SW7471B	11/08/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/18/13 17:25	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	11/18/13 17:25	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:25	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 17:25	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/08/13 15:25	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:25	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 17:25	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/18/13 17:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270D	11/15/13 20:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	91-58-7	

Lab Sample ID: S58868.04 (continued)
Sample Tag: Equipment Blank - 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/15/13 20:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/15/13 20:25	PL	118-74-1	

Lab Sample ID: S58868.04 (continued)
Sample Tag: Equipment Blank - 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 20:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 19:40	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 19:40	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 19:40	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 19:40	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 19:40	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 19:40	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	120-82-1	

Lab Sample ID: S58868.04 (continued)
Sample Tag: Equipment Blank - 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:40	JGH	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

77084

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 2 Project#: B00644 .2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wells

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 8011-9 SIM	TAL Metals	Miss Ba, Arsenic, Ammonia	SVOCs
58868.01	11-6	09:30	P2SB03 (1/6)	GW	6	2	3	1					4	x		x
.02	11-6	10:32	P2 MW-04 (1/6)	GW	6	2	3	1					4	x		x
.03	11.6	7:00	Trip Blank	GW	1		1						4			
.04	11.6	14:00	Equipment Blank - 1	GW	7	2	3	2					4	4	4	x

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Cliff Wells ☑ Sampler	DATE 11-6	TIME 17:00	
RECEIVED BY: SIGNATURE/ORGANIZATION	PME Storage	DATE 11-6	TIME 17:00	
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME Storage	DATE 11-7	TIME 8:40	
RECEIVED BY: SIGNATURE/ORGANIZATION	[signature] Me	DATE 11.7.13	TIME 8:40	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	[signature]	DATE 11.6.13	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION	Kem George	DATE 11/7/13	TIME 1030	

SEAL NO. _____ SEAL INTACT YES ☐ NO ☐ INITIALS _____

SEAL NO. _____ SEAL INTACT YES ☐ NO ☐ INITIALS _____

NOTES: TEMP. ON ARRIVAL 5.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58867.01(01)
Generated on 11/19/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58867.01-S58867.03
Project: Lansing Plant 2 Project#: B0064479.2013.
Collected Date: 11/06/2013
Submitted Date/Time: 11/07/2013 10:30
Sampled by: Unknown
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58867.01	MW-13-38 (11062013)	Groundwater	11/06/2013 13:00
S58867.02	MW-13-37 (11062013)	Groundwater	11/06/2013 15:20
S58867.03	Trip Blank (11062013)	Liquid	11/06/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58867.01
Sample Tag: MW-13-38 (11062013)
Collected Date/Time: 11/06/2013 13:00
Matrix: Groundwater
COC Reference: 77092

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/12/13 14:22	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 10:00	CCM		
Mercury Digestion	Completed			SW7471B	11/08/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7440-36-0	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020A	11/18/13 17:39	PER	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020A	11/18/13 16:56	PER	7440-38-2	
Barium, Dissolved	0.127	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7440-39-3	
Barium	0.128	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020A	11/18/13 17:39	PER	7440-42-8	
Boron	0.12	mg/L	0.04	SW6020A	11/18/13 16:56	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:39	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:56	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7440-47-3	
Chromium	0.043	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 17:39	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:56	PER	7439-92-1	
Manganese, Dissolved	0.117	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7439-96-5	
Manganese	0.127	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 15:05	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/08/13 15:19	CCM	7439-97-6	
Nickel, Dissolved	0.017	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7440-02-0	
Nickel	0.032	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7440-02-0	
Selenium, Dissolved	0.005	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:39	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:56	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 17:39	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 16:56	PER	7440-62-2	
Zinc, Dissolved	0.011	mg/L	0.005	SW6020A	11/18/13 17:39	PER	7440-66-6	
Zinc	0.009	mg/L	0.005	SW6020A	11/18/13 16:56	PER	7440-66-6	

Lab Sample ID: S58867.01 (continued)
Sample Tag: MW-13-38 (11062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/15/13 18:11	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	88-75-5	

Lab Sample ID: S58867.01 (continued)
Sample Tag: MW-13-38 (11062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/15/13 18:11	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 18:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 09:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 09:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 09:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 09:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 09:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	108-87-2	

Lab Sample ID: S58867.01 (continued)
Sample Tag: MW-13-38 (11062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 09:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 09:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58867.02
Sample Tag: MW-13-37 (11062013)
Collected Date/Time: 11/06/2013 15:20
Matrix: Groundwater
COC Reference: 77092

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/12/13 14:22	EMR		
Mercury Digestion	Completed			SW7471B	11/08/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020A	11/18/13 17:19	PER	7440-38-2	
Barium	0.222	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	11/18/13 17:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 17:19	PER	7439-92-1	
Manganese	0.159	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/08/13 15:21	CCM	7439-97-6	
Nickel	0.014	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 17:19	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	11/18/13 17:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	91-58-7	

Lab Sample ID: S58867.02 (continued)
Sample Tag: MW-13-37 (11062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/15/13 18:45	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/15/13 18:45	PL	118-74-1	

Lab Sample ID: S58867.02 (continued)
Sample Tag: MW-13-37 (11062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 18:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 09:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 09:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 09:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 09:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 09:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 09:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	120-82-1	

Lab Sample ID: S58867.02 (continued)
Sample Tag: MW-13-37 (11062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 09:23	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58867.03
Sample Tag: Trip Blank (11062013)
Collected Date/Time: 11/06/2013 00:01
Matrix: Liquid
COC Reference: 77092

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:30	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 18:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 09:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 09:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 09:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 09:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 09:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	79-34-5	

Lab Sample ID: S58867.03 (continued)
Sample Tag: Trip Blank (11062013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 09:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 09:44	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

77092

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant Project#: B00644 .2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL METALS	DISSOLVED TAL METALS
58867.01	11/6/13	13:00	MW-13-36 (11062013)	GW	7	2	3	2					3	2	1	1
.02	11/6/13	15:20	MW-13-37 (11062013)	GW	6	2	3	1					3	2	1	
.03	—	—	TRIP BLANK (11062013)	L	1		1						1			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS ☒ Sampler	DATE 11/6/13	TIME 16:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-6-13	TIME 16:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-6	TIME 17:00
RECEIVED BY: SIGNATURE/ORGANIZATION	PME STORAGE	DATE 11-6	TIME 17:00

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	MSA	DATE 11-7-13	TIME 8:40
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8 11/7/13 1030
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58866.01(01)
Generated on 11/19/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58866.01-S58866.02
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/06/2013
Submitted Date/Time: 11/07/2013 10:30
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58866.01	MWBP-12 UST 5-6 (11-6)	Groundwater	11/06/2013 13:30
S58866.02	MWBP-10 UST 5-6 (11-6)	Groundwater	11/06/2013 14:38

Analytical Laboratory Report

Lab Sample ID: S58866.01
Sample Tag: MWBP-12 UST 5-6 (11-6)
Collected Date/Time: 11/06/2013 13:30
Matrix: Groundwater
COC Reference: 77083

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/12/13 14:22	EMR		
Mercury Digestion	Completed			SW7471B	11/08/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020A	11/18/13 16:50	PER	7440-38-2	
Barium	0.080	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	11/18/13 16:50	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:50	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:50	PER	7439-92-1	
Manganese	0.237	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/08/13 15:01	CCM	7439-97-6	
Nickel	0.094	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:50	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 16:50	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	11/18/13 16:50	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	91-58-7	

Lab Sample ID: S58866.01 (continued)
Sample Tag: MWBP-12 UST 5-6 (11-6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/15/13 17:05	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/15/13 17:05	PL	118-74-1	

Lab Sample ID: S58866.01 (continued)
Sample Tag: MWBP-12 UST 5-6 (11-6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	8	ug/L	5	SW8260B - SIM	11/08/13 17:37	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 08:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 08:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 08:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 08:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 08:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 08:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	120-82-1	

Lab Sample ID: S58866.01 (continued)
Sample Tag: MWBP-12 UST 5-6 (11-6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 08:24	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58866.02
Sample Tag: MWBP-10 UST 5-6 (11-6)
Collected Date/Time: 11/06/2013 14:38
Matrix: Groundwater
COC Reference: 77083

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/12/13 14:22	EMR		
Mercury Digestion	Completed			SW7471B	11/08/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020A	11/18/13 16:52	PER	7440-38-2	
Barium	0.204	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020A	11/18/13 16:52	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:52	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:52	PER	7439-92-1	
Manganese	0.100	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/08/13 15:03	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:52	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 16:52	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/18/13 16:52	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	91-58-7	

Lab Sample ID: S58866.02 (continued)
Sample Tag: MWBP-10 UST 5-6 (11-6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/15/13 17:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/15/13 17:38	PL	118-74-1	

Lab Sample ID: S58866.02 (continued)
Sample Tag: MWBP-10 UST 5-6 (11-6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 17:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 08:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 08:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	1	ug/L	1	SW8260C	11/08/13 08:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 08:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 08:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 08:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 08:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	120-82-1	

Lab Sample ID: S58866.02 (continued)
Sample Tag: MWBP-10 UST 5-6 (11-6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 08:44	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

77083

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B00644 .2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wolls

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC DI 1-4 SIM	TAL METAL	SVOCS
58866.01	11-6	13:30	MWBP-12 UST 5-6 (11-6)	GW	6	2	3	1					X	X	X
.02	11-6	14:38	MWBP-10 UST 5-6 (11-6)	GW	6	2	3	1					X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Cliff Wolls ☑ Sampler	DATE 11-6	TIME 17:00
RECEIVED BY: SIGNATURE/ORGANIZATION	PME Storage	DATE 11-6	TIME 17:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME STORAGE	DATE 11-7	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-7-13	TIME 840

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11-6-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/7/13	TIME 1030
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58865.01(01)
Generated on 11/19/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

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Report produced by

Merit Laboratories, Inc.
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Kevin George (kgeorge@meritlabs.com)
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Report Summary

Lab Sample ID(s): S58865.01-S58865.03
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/06/2013
Submitted Date/Time: 11/07/2013 10:30
Sampled by: Robert Prigge
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58865.01	MW-13-33	Groundwater	11/06/2013 09:40
S58865.02	MW-02-01	Groundwater	11/06/2013 16:50
S58865.03	Trip Blank	Liquid	11/06/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58865.01
Sample Tag: MW-13-33
Collected Date/Time: 11/06/2013 09:40
Matrix: Groundwater
COC Reference: 77093

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/11/13 15:11	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 10:00	CCM		
Mercury Digestion	Completed			SW7471B	11/07/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	11/18/13 17:35	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/18/13 16:46	PER	7440-38-2	
Barium, Dissolved	0.084	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7440-39-3	
Barium	0.087	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020A	11/18/13 17:35	PER	7440-42-8	
Boron	0.14	mg/L	0.04	SW6020A	11/18/13 16:46	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:35	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:46	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7440-48-4	
Copper, Dissolved	0.008	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7440-50-8	
Copper	0.011	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 17:35	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:46	PER	7439-92-1	
Manganese, Dissolved	0.017	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7439-96-5	
Manganese	0.029	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 15:02	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 15:32	CCM	7439-97-6	
Nickel, Dissolved	0.010	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7440-02-0	
Nickel	0.011	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:35	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:46	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 17:35	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 16:46	PER	7440-62-2	
Zinc, Dissolved	0.009	mg/L	0.005	SW6020A	11/18/13 17:35	PER	7440-66-6	
Zinc	0.009	mg/L	0.005	SW6020A	11/18/13 16:46	PER	7440-66-6	

Lab Sample ID: S58865.01 (continued)
Sample Tag: MW-13-33

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 22:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/12/13 22:12	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	88-75-5	

Lab Sample ID: S58865.01 (continued)
Sample Tag: MW-13-33

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 22:12	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 16:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 07:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 07:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 07:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 07:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 07:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	108-87-2	

Lab Sample ID: S58865.01 (continued)
Sample Tag: MW-13-33

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 07:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 07:23	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58865.02
Sample Tag: MW-02-01
Collected Date/Time: 11/06/2013 16:50
Matrix: Groundwater
COC Reference: 77093

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/12/13 14:22	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 10:00	CCM		
Mercury Digestion	Completed			SW7471B	11/07/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7440-36-0	
Arsenic, Dissolved	0.006	mg/L	0.002	SW6020A	11/18/13 17:37	PER	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020A	11/18/13 16:48	PER	7440-38-2	
Barium, Dissolved	0.086	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7440-39-3	
Barium	0.090	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7440-39-3	
Boron, Dissolved	0.12	mg/L	0.04	SW6020A	11/18/13 17:37	PER	7440-42-8	
Boron	0.12	mg/L	0.04	SW6020A	11/18/13 16:48	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:37	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:48	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 17:37	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:48	PER	7439-92-1	
Manganese, Dissolved	0.046	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7439-96-5	
Manganese	0.059	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 15:03	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 15:34	CCM	7439-97-6	
Nickel, Dissolved	0.005	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7440-02-0	
Nickel	0.007	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/18/13 17:37	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:48	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 17:37	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 16:48	PER	7440-62-2	
Zinc, Dissolved	0.006	mg/L	0.005	SW6020A	11/18/13 17:37	PER	7440-66-6	
Zinc	0.008	mg/L	0.005	SW6020A	11/18/13 16:48	PER	7440-66-6	

Lab Sample ID: S58865.02 (continued)
Sample Tag: MW-02-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/15/13 16:31	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	88-75-5	

Lab Sample ID: S58865.02 (continued)
Sample Tag: MW-02-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/15/13 16:31	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 17:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 07:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 07:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 07:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 07:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 07:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	108-87-2	

Lab Sample ID: S58865.02 (continued)
Sample Tag: MW-02-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 07:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 07:43	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58865.03
Sample Tag: Trip Blank
Collected Date/Time: 11/06/2013 00:01
Matrix: Liquid
COC Reference: 77093

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 17:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 08:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 08:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 08:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 08:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 08:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	79-34-5	

Lab Sample ID: S58865.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 08:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 08:03	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77093

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B0064480.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Risse

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals	TAL Dissolved Metals
58865.01	11/06/13	09:40	MW-13-33	GW	7	X	X	X					3	2	1	1
.02	11/06/13	16:50	MW-02-Cj	GW	7	X	X	X					3	2	1	1
.03	--	--	Trip Blank	--	1		X						1			

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☑ Sampler DATE 11/07/13 TIME 07:30
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 11/07/13 TIME 0720

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 11.7.13 TIME 840

RELINQUISHED BY: SIGNATURE/ORGANIZATION Kevin George DATE 11.6.13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 11/7/13 TIME 1030

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58864.01(01)
Generated on 11/18/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58864.01-S58864.05
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/06/2013
Submitted Date/Time: 11/07/2013 10:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58864.01	MW-12-15 (11613)	Groundwater	11/06/2013 10:05
S58864.02	MW-12-11 (11613)	Groundwater	11/06/2013 11:45
S58864.03	MW-12-03 (11613)	Groundwater	11/06/2013 16:25
S58864.04	EQ-Z (11613)	Liquid	11/06/2013 17:30
S58864.05	Trip Blank	Liquid	11/06/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S58864.01
Sample Tag: MW-12-15 (11613)
Collected Date/Time: 11/06/2013 10:05
Matrix: Groundwater
COC Reference: 77089

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/11/13 15:11	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	11/18/13 17:27	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/18/13 16:32	PER	7440-38-2	
Barium	0.297	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/18/13 16:32	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:32	PER	7440-43-9	
Chromium	0.007	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 17:27	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:32	PER	7439-92-1	
Manganese	0.338	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 15:24	CCM	7439-97-6	
Nickel	0.020	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:32	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 17:27	PER	7440-62-2	
Vanadium	0.004	mg/L	0.004	SW6020A	11/18/13 16:32	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020A	11/18/13 16:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	205-99-2	

Lab Sample ID: S58864.01 (continued)
Sample Tag: MW-12-15 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 19:58	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	4	ug/L	1	SW8270D	11/12/13 19:58	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	129-00-0	

Lab Sample ID: S58864.01 (continued)
Sample Tag: MW-12-15 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 19:58	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 15:11	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 05:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 05:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 05:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 05:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 05:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 05:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	100-42-5	

Lab Sample ID: S58864.01 (continued)
Sample Tag: MW-12-15 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 05:42	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58864.02
Sample Tag: MW-12-11 (11613)
Collected Date/Time: 11/06/2013 11:45
Matrix: Groundwater
COC Reference: 77089

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/11/13 15:11	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7440-36-0	
Arsenic, Dissolved	0.008	mg/L	0.002	SW6020A	11/18/13 17:31	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020A	11/18/13 16:40	PER	7440-38-2	
Barium	0.115	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020A	11/18/13 16:40	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:40	PER	7440-43-9	
Chromium	0.013	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 17:31	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:40	PER	7439-92-1	
Manganese	0.857	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 15:26	CCM	7439-97-6	
Nickel	0.045	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7440-02-0	
Selenium	0.010	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7782-49-2	
Silver	0.0006	mg/L	0.0005	SW6020A	11/18/13 16:40	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 17:31	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 16:40	PER	7440-62-2	
Zinc	0.010	mg/L	0.005	SW6020A	11/18/13 16:40	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	205-99-2	

Lab Sample ID: S58864.02 (continued)
Sample Tag: MW-12-11 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 20:31	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	129-00-0	

Lab Sample ID: S58864.02 (continued)
Sample Tag: MW-12-11 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 20:31	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 15:29	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 06:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 06:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 06:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 06:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 06:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 06:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	100-42-5	

Lab Sample ID: S58864.02 (continued)
Sample Tag: MW-12-11 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 06:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58864.03
Sample Tag: MW-12-03 (11613)
Collected Date/Time: 11/06/2013 16:25
Matrix: Groundwater
COC Reference: 77089

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/11/13 15:11	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/18/13 16:42	PER	7440-38-2	
Barium	0.185	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	11/18/13 16:42	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:42	PER	7440-43-9	
Chromium	0.005	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7440-47-3	
Cobalt	0.006	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:42	PER	7439-92-1	
Manganese	0.965	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 15:28	CCM	7439-97-6	
Nickel	0.024	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:42	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 16:42	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	11/18/13 16:42	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	91-58-7	

Lab Sample ID: S58864.03 (continued)
Sample Tag: MW-12-03 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 21:05	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/12/13 21:05	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 21:05	PL	118-74-1	

Lab Sample ID: S58864.03 (continued)
Sample Tag: MW-12-03 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 15:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 06:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 06:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 06:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 06:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 06:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 06:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	120-82-1	

Lab Sample ID: S58864.03 (continued)
Sample Tag: MW-12-03 (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 06:23	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58864.04
Sample Tag: EQ-Z (11613)
Collected Date/Time: 11/06/2013 17:30
Matrix: Liquid
COC Reference: 77089

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/11/13 15:11	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/18/13 16:44	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	11/18/13 16:44	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:44	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 16:44	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 15:30	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 16:44	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 16:44	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/18/13 16:44	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	91-58-7	

Lab Sample ID: S58864.04 (continued)
Sample Tag: EQ-Z (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 21:39	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 21:39	PL	118-74-1	

Lab Sample ID: S58864.04 (continued)
Sample Tag: EQ-Z (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 16:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 06:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 06:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 06:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 06:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 06:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 06:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	120-82-1	

Lab Sample ID: S58864.04 (continued)
Sample Tag: EQ-Z (11613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 06:43	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58864.05
Sample Tag: Trip Blank
Collected Date/Time: 11/06/2013 07:00
Matrix: Liquid
COC Reference: 77089

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 16:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 07:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 07:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 07:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 07:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 07:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	79-34-5	

Lab Sample ID: S58864.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 07:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 07:03	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77089

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	**Randy Christensen**
COMPANY	**ARCADIS**
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	**ARCADIS**
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448/.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☒ ~~Detroit~~ MI ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs, 1,4-dioxane, 8260 SIMS	TCL SVOCs	TAL METALS	Diss As, Fe, Mn, Pb, Van
58864.01	11/6	1005	MW-12-15 (11613)	GW	7	2	3	2					X	X	X	X
.02	11/6	1145	MW-12-11 (11613)	GW	7	2	3	2					X	X	X	X
.03	11/6	1625	MW-12-03 (11613)	GW	6	2	3	1					X	X	X	
.04	11/6	1730	EQ-2 (11613)	L	~~7~~ 6	2	3	1					X	X	X	X
.05	11/6	0700	TRIP BLANK	L	1		1						X			

SS

RELINQUISHED BY: SIGNATURE/ORGANIZATION	PM STORAGE ENV (X Sampler)	DATE 11/6/13	TIME 1800
RECEIVED BY: SIGNATURE/ORGANIZATION	PM STORAGE	DATE 11/6/13	TIME 1800
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-6-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kerri George	DATE 11/7/13	TIME 1030
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58837.01(01)
Generated on 11/18/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58837.01-S58837.03
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/05/2013
Submitted Date/Time: 11/06/2013 09:30
Sampled by: Robert Prigge
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58837.01	MW-12-04	Groundwater	11/05/2013 14:40
S58837.02	MW-88-1	Groundwater	11/05/2013 17:05
S58837.03	Trip Blank	Liquid	11/05/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58837.01
Sample Tag: MW-12-04
Collected Date/Time: 11/05/2013 14:40
Matrix: Groundwater
COC Reference: 77094

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7440-36-0	
Arsenic, Dissolved	0.010	mg/L	0.002	SW6020A	11/18/13 15:55	PER	7440-38-2	
Arsenic	0.010	mg/L	0.002	SW6020A	11/18/13 15:17	PER	7440-38-2	
Barium	0.140	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020A	11/18/13 15:17	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:17	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 15:55	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:17	PER	7439-92-1	
Manganese	0.111	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 14:03	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:17	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 15:55	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 15:17	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/18/13 15:17	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	205-99-2	

Lab Sample ID: S58837.01 (continued)
Sample Tag: MW-12-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/13/13 00:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/13/13 00:27	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	129-00-0	

Lab Sample ID: S58837.01 (continued)
Sample Tag: MW-12-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/13/13 00:27	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 20:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 17:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 17:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 17:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 17:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 17:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 17:04	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	100-42-5	

Lab Sample ID: S58837.01 (continued)
Sample Tag: MW-12-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 17:04	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58837.02
Sample Tag: MW-88-1
Collected Date/Time: 11/05/2013 17:05
Matrix: Groundwater
COC Reference: 77094

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
1	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020A	11/18/13 15:19	PER	7440-38-2	
Barium	0.091	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020A	11/18/13 15:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:19	PER	7439-92-1	
Manganese	0.026	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 14:15	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 15:19	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020A	11/18/13 15:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	91-58-7	

Lab Sample ID: S58837.02 (continued)
Sample Tag: MW-88-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/13/13 01:01	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/13/13 01:01	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/13/13 01:01	PL	118-74-1	

Lab Sample ID: S58837.02 (continued)
Sample Tag: MW-88-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 21:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 05:02	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 05:02	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 05:02	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 05:02	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 05:02	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 05:02	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	120-82-1	

Lab Sample ID: S58837.02 (continued)
Sample Tag: MW-88-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 05:02	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58837.03
Sample Tag: Trip Blank
Collected Date/Time: 11/05/2013 00:01
Matrix: Liquid
COC Reference: 77094

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 21:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 05:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 05:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 05:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 05:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 05:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	79-34-5	

Lab Sample ID: S58837.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 05:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 05:22	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77094

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.0.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Prigge

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals	Dissolved Uranium							
58837.01	11/05/13	14:40	MW-12-04	GW	7	X	X	X					3	2	1	1							
.02	11/05/13	17:05	MW-88-1	GW	6	X	X	X					3	2	1								
.03	--	--	Trip Blank	--	1		X						1										

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/05/13	TIME 17:25
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/5/13	TIME 17:25
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11/5/13	TIME 1745
RECEIVED BY: SIGNATURE/ORGANIZATION	Pat Stange	DATE 11/5/13	TIME 1745
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-6-13	TIME

SEAL NO. ____ SEAL INTACT YES ☐ NO ☐ INITIALS ____

SEAL NO. ____ SEAL INTACT YES ☐ NO ☐ INITIALS Kevin Stange 11/6/13 930

NOTES: TEMP. ON ARRIVAL ____

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58836.01(01)
Generated on 11/18/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58836.01-S58836.04
Project: Lansing Plant 2 Project#: B0064479.2013.00603
Collected Date: 11/05/2013
Submitted Date/Time: 11/06/2013 09:30
Sampled by: Cliff Walls
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58836.01	MW-12-02 (11-5)	Groundwater	11/05/2013 12:00
S58836.02	P2-MW-01 (11-5)	Groundwater	11/05/2013 13:32
S58836.03	P2-MW-03 (11-5)	Groundwater	11/05/2013 15:45
S58836.04	Trip Blank	Groundwater	11/05/2013 10:30

Analytical Laboratory Report

Lab Sample ID: S58836.01
Sample Tag: MW-12-02 (11-5)
Collected Date/Time: 11/05/2013 12:00
Matrix: Groundwater
COC Reference: 77088

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7440-36-0	
Arsenic, Dissolved	0.007	mg/L	0.002	SW6020A	11/18/13 15:51	PER	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020A	11/18/13 15:11	PER	7440-38-2	
Barium	0.181	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	11/18/13 15:11	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:11	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 15:51	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:11	PER	7439-92-1	
Manganese	0.304	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 13:57	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:11	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 15:51	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 15:11	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/18/13 15:11	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	205-99-2	

Lab Sample ID: S58836.01 (continued)
Sample Tag: MW-12-02 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 22:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	129-00-0	

Lab Sample ID: S58836.01 (continued)
Sample Tag: MW-12-02 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 22:46	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 19:36	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 03:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 03:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 03:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 03:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 03:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 03:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	100-42-5	

Lab Sample ID: S58836.01 (continued)
Sample Tag: MW-12-02 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 03:21	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58836.02
Sample Tag: P2-MW-01 (11-5)
Collected Date/Time: 11/05/2013 13:32
Matrix: Groundwater
COC Reference: 77088

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
1	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020A	11/18/13 15:13	PER	7440-38-2	
Barium	0.775	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/18/13 15:13	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:13	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7440-48-4	
Copper	0.005	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:13	PER	7439-92-1	
Manganese	0.124	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 13:59	CCM	7439-97-6	
Nickel	0.022	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:13	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 15:13	PER	7440-62-2	
Zinc	0.025	mg/L	0.005	SW6020A	11/18/13 15:13	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	91-58-7	

Lab Sample ID: S58836.02 (continued)
Sample Tag: P2-MW-01 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 23:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	5	ug/L	1	SW8270D	11/12/13 23:20	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 23:20	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S58836.02 (continued)
Sample Tag: P2-MW-01 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 19:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 03:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 03:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 03:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 03:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 03:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 03:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	120-82-1	

Lab Sample ID: S58836.02 (continued)
Sample Tag: P2-MW-01 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 03:41	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58836.03
Sample Tag: P2-MW-03 (11-5)
Collected Date/Time: 11/05/2013 15:45
Matrix: Groundwater
COC Reference: 77088

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
3	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/08/13 09:00	CCM		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020A	11/18/13 15:53	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020A	11/18/13 15:15	PER	7440-38-2	
Barium, Dissolved	0.351	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7440-39-3	
Barium	0.369	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7440-39-3	
Boron, Dissolved	0.12	mg/L	0.04	SW6020A	11/18/13 15:53	PER	7440-42-8	
Boron	0.11	mg/L	0.04	SW6020A	11/18/13 15:15	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:53	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:15	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7440-47-3	
Chromium	0.005	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7440-50-8	
Copper	0.005	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 15:53	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:15	PER	7439-92-1	
Manganese, Dissolved	0.089	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7439-96-5	
Manganese	0.167	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/08/13 14:47	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 14:01	CCM	7439-97-6	
Nickel, Dissolved	0.008	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7440-02-0	
Nickel	0.013	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:53	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:15	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 15:53	PER	7440-62-2	
Vanadium	0.007	mg/L	0.004	SW6020A	11/18/13 15:15	PER	7440-62-2	
Zinc, Dissolved	0.011	mg/L	0.005	SW6020A	11/18/13 15:53	PER	7440-66-6	
Zinc	0.020	mg/L	0.005	SW6020A	11/18/13 15:15	PER	7440-66-6	

Lab Sample ID: S58836.03 (continued)
Sample Tag: P2-MW-03 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 23:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/12/13 23:53	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S58836.03 (continued)
Sample Tag: P2-MW-03 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 23:53	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	15	ug/L	5	SW8260B - SIM	11/06/13 20:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 04:02	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 04:02	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 04:02	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 04:02	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 04:02	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-27-4	

Lab Sample ID: S58836.03 (continued)
Sample Tag: P2-MW-03 (11-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 04:02	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 04:02	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58836.04
Sample Tag: Trip Blank
Collected Date/Time: 11/05/2013 10:30
Matrix: Groundwater
COC Reference: 77088

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 20:30	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 04:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 04:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 04:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 04:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 04:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	79-34-5	

Lab Sample ID: S58836.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 04:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 04:22	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77088

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	**Randy Christensen**
COMPANY	**ARCADIS**
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	**ARCADIS**
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 2 Project#: B00644 .2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wells

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 624 SIM	SVOC 5	Mass TAL Metals	TAL Metals	Pb, Arsenic, Vanadium						
58836.01	11-5	12:00	MW-12 02 (11-5)	GW	7	2	3	2					X	X		X	X						
.02	11-5	13:30	P2 MW-01 (11-5)	GW	6	2	3	1					X	X		X							
.03	11-5	15:45	P2 MW-03 (11-5)	GW	8	2	3	3					X	X	X	X	X						
.04	11-5	10:30	Trip Blank	GW	1		1						X										

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Cliff Wells	☐ Sampler DATE	11-5 TIME 18:00
RECEIVED BY: SIGNATURE/ORGANIZATION	PME Storage	DATE	11-5 TIME 1800
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME Storage	DATE	11-6 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	11-6-13 TIME 830

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	11-6-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE	11/6/13 TIME 930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58835.01(01)
Generated on 11/18/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58835.01-S58835.05
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/05/2013
Submitted Date/Time: 11/06/2013 09:30
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58835.01	MW-04-04 (11052013)	Groundwater	11/05/2013 13:50
S58835.02	MW-04-04 (11052013) MS	Groundwater	11/05/2013 13:50
S58835.03	MW-04-04 (11052013) MSD	Groundwater	11/05/2013 13:50
S58835.04	MW-91-4 (11052013)	Groundwater	11/05/2013 16:00
S58835.05	Trip Blank (11052013)	Liquid	11/05/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58835.01
Sample Tag: MW-04-04 (11052013)
Collected Date/Time: 11/05/2013 13:50
Matrix: Groundwater
COC Reference: 77091

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7440-36-0	
Arsenic, Dissolved	0.012	mg/L	0.002	SW6020A	11/18/13 15:57	PER	7440-38-2	
Arsenic	0.011	mg/L	0.002	SW6020A	11/18/13 15:23	PER	7440-38-2	
Barium	0.096	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7440-39-3	
Boron	0.33	mg/L	0.04	SW6020A	11/18/13 15:23	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:23	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 15:57	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:23	PER	7439-92-1	
Manganese	0.434	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 14:33	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:23	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 15:57	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 15:23	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	11/18/13 15:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	205-99-2	

Lab Sample ID: S58835.01 (continued)
Sample Tag: MW-04-04 (11052013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 08:48	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	129-00-0	

Lab Sample ID: S58835.01 (continued)
Sample Tag: MW-04-04 (11052013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 08:48	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 21:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 17:39	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 17:39	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 17:39	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	74-87-3	
Vinyl chloride	3	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-34-3	
cis-1,2-Dichloroethene	3	ug/L	1	SW8260C	11/11/13 17:39	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 17:39	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 17:39	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 17:39	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	100-42-5	

Lab Sample ID: S58835.01 (continued)
Sample Tag: MW-04-04 (11052013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 17:39	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58835.02
Sample Tag: MW-04-04 (11052013) MS
Collected Date/Time: 11/05/2013 13:50
Matrix: Groundwater
COC Reference: 77091

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:30	WAT		
Metals								
Antimony	0.254	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7440-36-0	
Arsenic, Dissolved	0.259	mg/L	0.002	SW6020A	11/18/13 15:59	PER	7440-38-2	
Arsenic	0.264	mg/L	0.002	SW6020A	11/18/13 15:25	PER	7440-38-2	
Barium	0.355	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7440-39-3	
Boron	0.57	mg/L	0.04	SW6020A	11/18/13 15:25	PER	7440-42-8	
Cadmium	0.256	mg/L	0.0005	SW6020A	11/18/13 15:25	PER	7440-43-9	
Chromium	0.250	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7440-47-3	
Cobalt	0.240	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7440-48-4	
Copper	0.232	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7440-50-8	
Lead, Dissolved	0.236	mg/L	0.003	SW6020A	11/18/13 15:59	PER	7439-92-1	
Lead	0.237	mg/L	0.003	SW6020A	11/18/13 15:25	PER	7439-92-1	
Manganese	0.681	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471B	11/07/13 14:35	CCM	7439-97-6	
Nickel	0.250	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7440-02-0	
Selenium	0.270	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7782-49-2	
Silver	0.243	mg/L	0.0005	SW6020A	11/18/13 15:25	PER	7440-22-4	
Vanadium, Dissolved	0.245	mg/L	0.004	SW6020A	11/18/13 15:59	PER	7440-62-2	
Vanadium	0.247	mg/L	0.004	SW6020A	11/18/13 15:25	PER	7440-62-2	
Zinc	0.256	mg/L	0.005	SW6020A	11/18/13 15:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	35	ug/L	1	SW8270D	11/12/13 09:21	PL	83-32-9	1
Acenaphthylene	37	ug/L	1	SW8270D	11/12/13 09:21	PL	208-96-8	1
Acetophenone	37	ug/L	1	SW8270D	11/12/13 09:21	PL	98-86-2	1
Anthracene	39	ug/L	1	SW8270D	11/12/13 09:21	PL	120-12-7	1
Atrazine	32	ug/L	1	SW8270D	11/12/13 09:21	PL	1912-24-9	1
1,1'-Biphenyl	33	ug/L	1	SW8270D	11/12/13 09:21	PL	92-52-4	1
4-Bromophenyl phenyl ether	40	ug/L	1	SW8270D	11/12/13 09:21	PL	101-55-3	1
di-n-Butyl phthalate	43	ug/L	1	SW8270D	11/12/13 09:21	PL	84-74-2	1
Benzaldehyde	25	ug/L	1	SW8270D	11/12/13 09:21	PL	100-52-7	1
Benzo(a)anthracene	41	ug/L	1	SW8270D	11/12/13 09:21	PL	56-55-3	1
Benzo(a)pyrene	40	ug/L	1	SW8270D	11/12/13 09:21	PL	50-32-8	1

1-Sample spiked at 0.051 mg/l

Lab Sample ID: S58835.02 (continued)
Sample Tag: MW-04-04 (11052013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(b)fluoranthene	38	ug/L	1	SW8270D	11/12/13 09:21	PL	205-99-2	1
Benzo(ghi)perylene	44	ug/L	1	SW8270D	11/12/13 09:21	PL	191-24-2	1
Benzo(k)fluoranthene	36	ug/L	1	SW8270D	11/12/13 09:21	PL	207-08-9	1
Butyl benzyl phthalate	44	ug/L	1	SW8270D	11/12/13 09:21	PL	85-68-7	1
2-Chloronaphthalene	34	ug/L	1	SW8270D	11/12/13 09:21	PL	91-58-7	1
2-Chlorophenol	32	ug/L	1	SW8270D	11/12/13 09:21	PL	95-57-8	1
4-Chloro-3-methylphenol	37	ug/L	1	SW8270D	11/12/13 09:21	PL	59-50-7	1
4-Chloroaniline	24	ug/L	1	SW8270D	11/12/13 09:21	PL	106-47-8	1
4-Chlorophenyl phenyl ether	37	ug/L	1	SW8270D	11/12/13 09:21	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270D	11/12/13 09:21	PL	105-60-2	1
Carbazole	39	ug/L	1	SW8270D	11/12/13 09:21	PL	86-74-8	1
bis(2-Chloroethoxy)methane	35	ug/L	1	SW8270D	11/12/13 09:21	PL	111-91-1	1
bis(2-Chloroethyl)ether	37	ug/L	1	SW8270D	11/12/13 09:21	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	46	ug/L	1	SW8270D	11/12/13 09:21	PL	108-60-1	1
Chrysene	43	ug/L	1	SW8270D	11/12/13 09:21	PL	218-01-9	1
2,4-Dichlorophenol	34	ug/L	1	SW8270D	11/12/13 09:21	PL	120-83-2	1
2,4-Dimethylphenol	37	ug/L	1	SW8270D	11/12/13 09:21	PL	105-67-9	1
2,4-Dinitrophenol	27	ug/L	1	SW8270D	11/12/13 09:21	PL	51-28-5	1
2,4-Dinitrotoluene	38	ug/L	1	SW8270D	11/12/13 09:21	PL	121-14-2	1
2,6-Dinitrotoluene	38	ug/L	1	SW8270D	11/12/13 09:21	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	29	ug/L	1	SW8270D	11/12/13 09:21	PL	534-52-1	1
Dibenzo(ah)anthracene	53	ug/L	2	SW8270D	11/12/13 09:21	PL	53-70-3	1
Dibenzofuran	35	ug/L	1	SW8270D	11/12/13 09:21	PL	132-64-9	1
Diethyl phthalate	40	ug/L	1	SW8270D	11/12/13 09:21	PL	84-66-2	1
Dimethyl phthalate	38	ug/L	1	SW8270D	11/12/13 09:21	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	47	ug/L	1	SW8270D	11/12/13 09:21	PL	117-81-7	B1
Fluoranthene	40	ug/L	1	SW8270D	11/12/13 09:21	PL	206-44-0	1
Fluorene	36	ug/L	1	SW8270D	11/12/13 09:21	PL	86-73-7	1
Hexachlorobutadiene	32	ug/L	1	SW8270D	11/12/13 09:21	PL	87-68-3	1
Hexachlorocyclopentadiene	27	ug/L	1	SW8270D	11/12/13 09:21	PL	77-47-4	1
Hexachloroethane	31	ug/L	1	SW8270D	11/12/13 09:21	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	45	ug/L	1	SW8270D	11/12/13 09:21	PL	193-39-5	1
Isophorone	42	ug/L	1	SW8270D	11/12/13 09:21	PL	78-59-1	1
2-Methylnaphthalene	35	ug/L	1	SW8270D	11/12/13 09:21	PL	91-57-6	1
2-Methylphenol	35	ug/L	1	SW8270D	11/12/13 09:21	PL	95-48-7	1
3-, 4-Methylphenol	59	ug/L	1	SW8270D	11/12/13 09:21	PL	3/4-Cresol	1
2-Nitroaniline	35	ug/L	1	SW8270D	11/12/13 09:21	PL	88-74-4	1
2-Nitrophenol	32	ug/L	1	SW8270D	11/12/13 09:21	PL	88-75-5	1
3-Nitroaniline	25	ug/L	1	SW8270D	11/12/13 09:21	PL	99-09-2	1
4-Nitroaniline	34	ug/L	1	SW8270D	11/12/13 09:21	PL	100-01-6	1
4-Nitrophenol	30	ug/L	1	SW8270D	11/12/13 09:21	PL	100-02-7	1
N-Nitrosodi-n-propylamine	39	ug/L	1	SW8270D	11/12/13 09:21	PL	621-64-7	1
N-Nitrosodiphenylamine	39	ug/L	1	SW8270D	11/12/13 09:21	PL	86-30-6	1
Naphthalene	33	ug/L	1	SW8270D	11/12/13 09:21	PL	91-20-3	1
Nitrobenzene	34	ug/L	1	SW8270D	11/12/13 09:21	PL	98-95-3	1
di-n-Octyl phthalate	53	ug/L	1	SW8270D	11/12/13 09:21	PL	117-84-0	1
Pentachlorophenol	30	ug/L	1	SW8270D	11/12/13 09:21	PL	87-86-5	1

1-Sample spiked at 0.051 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S58835.02 (continued)
Sample Tag: MW-04-04 (11052013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenanthrene	38	ug/L	1	SW8270D	11/12/13 09:21	PL	85-01-8	1
Phenol	20	ug/L	1	SW8270D	11/12/13 09:21	PL	108-95-2	B1
Pyrene	42	ug/L	1	SW8270D	11/12/13 09:21	PL	129-00-0	1
2,4,5-Trichlorophenol	33	ug/L	1	SW8270D	11/12/13 09:21	PL	95-95-4	1
2,4,6-Trichlorophenol	33	ug/L	1	SW8270D	11/12/13 09:21	PL	88-06-2	1
Hexachlorobenzene	39	ug/L	1	SW8270D	11/12/13 09:21	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	55	ug/L	5	SW8260B - SIM	11/06/13 22:01	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	56	ug/L	1	SW8260C	11/11/13 22:21	JGH	76-13-1	2S
Acetone	41	ug/L	10	SW8260C	11/11/13 22:21	JGH	67-64-1	2S
Carbon disulfide	32	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-15-0	2S
Methyl Acetate	56	ug/L	10	SW8260C	11/11/13 22:21	JGH	79-20-9	2S
tert-Methyl butyl ether (MTBE)	61	ug/L	1	SW8260C	11/11/13 22:21	JGH	1634-04-4	2S
2-Butanone (MEK)	46	ug/L	10	SW8260C	11/11/13 22:21	JGH	78-93-3	2S
Dichlorodifluoromethane	51	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-71-8	2S
Chloromethane	48	ug/L	1	SW8260C	11/11/13 22:21	JGH	74-87-3	2S
Vinyl chloride	45	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-01-4	2S
Bromomethane	48	ug/L	1	SW8260C	11/11/13 22:21	JGH	74-83-9	2S
Chloroethane	48	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-00-3	2S
Trichlorofluoromethane	53	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-69-4	2S
1,1-Dichloroethene	51	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-35-4	2S
Methylene chloride	52	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-09-2	2S
trans-1,2-Dichloroethene	51	ug/L	1	SW8260C	11/11/13 22:21	JGH	156-60-5	2S
1,1-Dichloroethane	55	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-34-3	2S
cis-1,2-Dichloroethene	55	ug/L	1	SW8260C	11/11/13 22:21	JGH	156-59-2	2S
Chloroform	58	ug/L	1	SW8260C	11/11/13 22:21	JGH	67-66-3	2S
1,1,1-Trichloroethane	62	ug/L	1	SW8260C	11/11/13 22:21	JGH	71-55-6	2S
Cyclohexane	47	ug/L	1	SW8260C	11/11/13 22:21	JGH	110-82-7	2S
4-Methyl-2-pentanone (MIBK)	55	ug/L	10	SW8260C	11/11/13 22:21	JGH	108-10-1	2
2-Hexanone	49	ug/L	10	SW8260C	11/11/13 22:21	JGH	591-78-6	2
Carbon tetrachloride	59	ug/L	1	SW8260C	11/11/13 22:21	JGH	56-23-5	2
Benzene	50	ug/L	1	SW8260C	11/11/13 22:21	JGH	71-43-2	2
1,2-Dichloroethane	61	ug/L	1	SW8260C	11/11/13 22:21	JGH	107-06-2	2
Trichloroethene	50	ug/L	1	SW8260C	11/11/13 22:21	JGH	79-01-6	2
1,2-Dichloropropane	50	ug/L	1	SW8260C	11/11/13 22:21	JGH	78-87-5	2
Bromodichloromethane	56	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-27-4	2
Methyl cyclohexane	49	ug/L	1	SW8260C	11/11/13 22:21	JGH	108-87-2	2
cis-1,3-Dichloropropene	50	ug/L	1	SW8260C	11/11/13 22:21	JGH	10061-01-5	2
Toluene	49	ug/L	1	SW8260C	11/11/13 22:21	JGH	108-88-3	2
trans-1,3-Dichloropropene	50	ug/L	1	SW8260C	11/11/13 22:21	JGH	10061-02-6	2
1,1,2-Trichloroethane	53	ug/L	1	SW8260C	11/11/13 22:21	JGH	79-00-5	2
Tetrachloroethene	50	ug/L	1	SW8260C	11/11/13 22:21	JGH	127-18-4	2

1-Sample spiked at 0.051 mg/l
B-Compound also found in associated method blank
2-Spiked at 50ug/l
S-Surrogate recovery outside of control limits

Lab Sample ID: S58835.02 (continued)
Sample Tag: MW-04-04 (11052013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	51	ug/L	1	SW8260C	11/11/13 22:21	JGH	124-48-1	1
Chlorobenzene	51	ug/L	1	SW8260C	11/11/13 22:21	JGH	108-90-7	1
1,1,2,2-Tetrachloroethane	56	ug/L	1	SW8260C	11/11/13 22:21	JGH	79-34-5	1
Ethylbenzene	50	ug/L	1	SW8260C	11/11/13 22:21	JGH	100-41-4	1
p,m-Xylene	83	ug/L	2	SW8260C	11/11/13 22:21	JGH		1
o-Xylene	45	ug/L	1	SW8260C	11/11/13 22:21	JGH	95-47-6	1
Styrene	17	ug/L	1	SW8260C	11/11/13 22:21	JGH	100-42-5	1
Isopropylbenzene	53	ug/L	1	SW8260C	11/11/13 22:21	JGH	98-82-8	1
Bromoform	44	ug/L	1	SW8260C	11/11/13 22:21	JGH	75-25-2	1
1,3-Dichlorobenzene	55	ug/L	1	SW8260C	11/11/13 22:21	JGH	541-73-1	1
1,4-Dichlorobenzene	56	ug/L	1	SW8260C	11/11/13 22:21	JGH	106-46-7	1
1,2-Dichlorobenzene	57	ug/L	1	SW8260C	11/11/13 22:21	JGH	95-50-1	1
1,2,4-Trichlorobenzene	55	ug/L	1	SW8260C	11/11/13 22:21	JGH	120-82-1	1
1,2-Dibromoethane	56	ug/L	1	SW8260C	11/11/13 22:21	JGH	106-93-4	1
1,2-Dibromo-3-chloropropane	64	ug/L	1	SW8260C	11/11/13 22:21	JGH	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S58835.03
Sample Tag: MW-04-04 (11052013) MSD
Collected Date/Time: 11/05/2013 13:50
Matrix: Groundwater
COC Reference: 77091

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:30	WAT		
Metals								
Antimony	0.259	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7440-36-0	
Arsenic, Dissolved	0.263	mg/L	0.002	SW6020A	11/18/13 16:01	PER	7440-38-2	
Arsenic	0.260	mg/L	0.002	SW6020A	11/18/13 15:27	PER	7440-38-2	
Barium	0.356	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7440-39-3	
Boron	0.59	mg/L	0.04	SW6020A	11/18/13 15:27	PER	7440-42-8	
Cadmium	0.256	mg/L	0.0005	SW6020A	11/18/13 15:27	PER	7440-43-9	
Chromium	0.245	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7440-47-3	
Cobalt	0.239	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7440-48-4	
Copper	0.232	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7440-50-8	
Lead, Dissolved	0.235	mg/L	0.003	SW6020A	11/18/13 16:01	PER	7439-92-1	
Lead	0.239	mg/L	0.003	SW6020A	11/18/13 15:27	PER	7439-92-1	
Manganese	0.660	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471B	11/07/13 14:37	CCM	7439-97-6	
Nickel	0.251	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7440-02-0	
Selenium	0.266	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7782-49-2	
Silver	0.247	mg/L	0.0005	SW6020A	11/18/13 15:27	PER	7440-22-4	
Vanadium, Dissolved	0.241	mg/L	0.004	SW6020A	11/18/13 16:01	PER	7440-62-2	
Vanadium	0.253	mg/L	0.004	SW6020A	11/18/13 15:27	PER	7440-62-2	
Zinc	0.248	mg/L	0.005	SW6020A	11/18/13 15:27	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	42	ug/L	1	SW8270D	11/12/13 09:55	PL	83-32-9	1
Acenaphthylene	45	ug/L	1	SW8270D	11/12/13 09:55	PL	208-96-8	1
Acetophenone	44	ug/L	1	SW8270D	11/12/13 09:55	PL	98-86-2	1
Anthracene	46	ug/L	1	SW8270D	11/12/13 09:55	PL	120-12-7	1
Atrazine	38	ug/L	1	SW8270D	11/12/13 09:55	PL	1912-24-9	1
1,1'-Biphenyl	40	ug/L	1	SW8270D	11/12/13 09:55	PL	92-52-4	1
4-Bromophenyl phenyl ether	47	ug/L	1	SW8270D	11/12/13 09:55	PL	101-55-3	1
di-n-Butyl phthalate	51	ug/L	1	SW8270D	11/12/13 09:55	PL	84-74-2	1
Benzaldehyde	31	ug/L	1	SW8270D	11/12/13 09:55	PL	100-52-7	1
Benzo(a)anthracene	48	ug/L	1	SW8270D	11/12/13 09:55	PL	56-55-3	1
Benzo(a)pyrene	48	ug/L	1	SW8270D	11/12/13 09:55	PL	50-32-8	1

1-5883501.d

Lab Sample ID: S58835.03 (continued)
Sample Tag: MW-04-04 (11052013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(b)fluoranthene	45	ug/L	1	SW8270D	11/12/13 09:55	PL	205-99-2	1
Benzo(ghi)perylene	52	ug/L	1	SW8270D	11/12/13 09:55	PL	191-24-2	1
Benzo(k)fluoranthene	45	ug/L	1	SW8270D	11/12/13 09:55	PL	207-08-9	1
Butyl benzyl phthalate	52	ug/L	1	SW8270D	11/12/13 09:55	PL	85-68-7	1
2-Chloronaphthalene	41	ug/L	1	SW8270D	11/12/13 09:55	PL	91-58-7	1
2-Chlorophenol	39	ug/L	1	SW8270D	11/12/13 09:55	PL	95-57-8	1
4-Chloro-3-methylphenol	44	ug/L	1	SW8270D	11/12/13 09:55	PL	59-50-7	1
4-Chloroaniline	29	ug/L	1	SW8270D	11/12/13 09:55	PL	106-47-8	1
4-Chlorophenyl phenyl ether	44	ug/L	1	SW8270D	11/12/13 09:55	PL	7005-72-3	1
Caprolactam	7	ug/L	1	SW8270D	11/12/13 09:55	PL	105-60-2	1
Carbazole	45	ug/L	1	SW8270D	11/12/13 09:55	PL	86-74-8	1
bis(2-Chloroethoxy)methane	42	ug/L	1	SW8270D	11/12/13 09:55	PL	111-91-1	1
bis(2-Chloroethyl)ether	45	ug/L	1	SW8270D	11/12/13 09:55	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	55	ug/L	1	SW8270D	11/12/13 09:55	PL	108-60-1	1
Chrysene	52	ug/L	1	SW8270D	11/12/13 09:55	PL	218-01-9	1
2,4-Dichlorophenol	40	ug/L	1	SW8270D	11/12/13 09:55	PL	120-83-2	1
2,4-Dimethylphenol	44	ug/L	1	SW8270D	11/12/13 09:55	PL	105-67-9	1
2,4-Dinitrophenol	33	ug/L	1	SW8270D	11/12/13 09:55	PL	51-28-5	1
2,4-Dinitrotoluene	45	ug/L	1	SW8270D	11/12/13 09:55	PL	121-14-2	1
2,6-Dinitrotoluene	45	ug/L	1	SW8270D	11/12/13 09:55	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	35	ug/L	1	SW8270D	11/12/13 09:55	PL	534-52-1	1
Dibenzo(ah)anthracene	63	ug/L	2	SW8270D	11/12/13 09:55	PL	53-70-3	1
Dibenzofuran	43	ug/L	1	SW8270D	11/12/13 09:55	PL	132-64-9	1
Diethyl phthalate	48	ug/L	1	SW8270D	11/12/13 09:55	PL	84-66-2	1
Dimethyl phthalate	45	ug/L	1	SW8270D	11/12/13 09:55	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	56	ug/L	1	SW8270D	11/12/13 09:55	PL	117-81-7	B1
Fluoranthene	46	ug/L	1	SW8270D	11/12/13 09:55	PL	206-44-0	1
Fluorene	44	ug/L	1	SW8270D	11/12/13 09:55	PL	86-73-7	1
Hexachlorobutadiene	40	ug/L	1	SW8270D	11/12/13 09:55	PL	87-68-3	1
Hexachlorocyclopentadiene	36	ug/L	1	SW8270D	11/12/13 09:55	PL	77-47-4	1
Hexachloroethane	40	ug/L	1	SW8270D	11/12/13 09:55	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	53	ug/L	1	SW8270D	11/12/13 09:55	PL	193-39-5	1
Isophorone	51	ug/L	1	SW8270D	11/12/13 09:55	PL	78-59-1	1
2-Methylnaphthalene	42	ug/L	1	SW8270D	11/12/13 09:55	PL	91-57-6	1
2-Methylphenol	40	ug/L	1	SW8270D	11/12/13 09:55	PL	95-48-7	1
3-, 4-Methylphenol	70	ug/L	1	SW8270D	11/12/13 09:55	PL	3/4-Cresol	1
2-Nitroaniline	42	ug/L	1	SW8270D	11/12/13 09:55	PL	88-74-4	1
2-Nitrophenol	39	ug/L	1	SW8270D	11/12/13 09:55	PL	88-75-5	1
3-Nitroaniline	31	ug/L	1	SW8270D	11/12/13 09:55	PL	99-09-2	1
4-Nitroaniline	41	ug/L	1	SW8270D	11/12/13 09:55	PL	100-01-6	1
4-Nitrophenol	1	ug/L	1	SW8270D	11/12/13 09:55	PL	100-02-7	1
N-Nitrosodi-n-propylamine	48	ug/L	1	SW8270D	11/12/13 09:55	PL	621-64-7	1
N-Nitrosodiphenylamine	46	ug/L	1	SW8270D	11/12/13 09:55	PL	86-30-6	1
Naphthalene	41	ug/L	1	SW8270D	11/12/13 09:55	PL	91-20-3	1
Nitrobenzene	42	ug/L	1	SW8270D	11/12/13 09:55	PL	98-95-3	1
di-n-Octyl phthalate	62	ug/L	1	SW8270D	11/12/13 09:55	PL	117-84-0	1
Pentachlorophenol	38	ug/L	1	SW8270D	11/12/13 09:55	PL	87-86-5	1

1-5883501.d
B-Compound also found in associated method blank

Lab Sample ID: S58835.03 (continued)
Sample Tag: MW-04-04 (11052013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenanthrene	46	ug/L	1	SW8270D	11/12/13 09:55	PL	85-01-8	1
Phenol	23	ug/L	1	SW8270D	11/12/13 09:55	PL	108-95-2	B1
Pyrene	49	ug/L	1	SW8270D	11/12/13 09:55	PL	129-00-0	1
2,4,5-Trichlorophenol	39	ug/L	1	SW8270D	11/12/13 09:55	PL	95-95-4	1
2,4,6-Trichlorophenol	39	ug/L	1	SW8270D	11/12/13 09:55	PL	88-06-2	1
Hexachlorobenzene	47	ug/L	1	SW8270D	11/12/13 09:55	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	55	ug/L	5	SW8260B - SIM	11/06/13 22:19	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	56	ug/L	1	SW8260C	11/11/13 22:41	JGH	76-13-1	2
Acetone	40	ug/L	10	SW8260C	11/11/13 22:41	JGH	67-64-1	2
Carbon disulfide	37	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-15-0	2
Methyl Acetate	54	ug/L	10	SW8260C	11/11/13 22:41	JGH	79-20-9	2
tert-Methyl butyl ether (MTBE)	60	ug/L	1	SW8260C	11/11/13 22:41	JGH	1634-04-4	2
2-Butanone (MEK)	44	ug/L	10	SW8260C	11/11/13 22:41	JGH	78-93-3	2
Dichlorodifluoromethane	51	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-71-8	2
Chloromethane	47	ug/L	1	SW8260C	11/11/13 22:41	JGH	74-87-3	2
Vinyl chloride	45	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-01-4	2
Bromomethane	47	ug/L	1	SW8260C	11/11/13 22:41	JGH	74-83-9	2
Chloroethane	46	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-00-3	2
Trichlorofluoromethane	52	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-69-4	2
1,1-Dichloroethene	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-35-4	2
Methylene chloride	50	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-09-2	2
trans-1,2-Dichloroethene	49	ug/L	1	SW8260C	11/11/13 22:41	JGH	156-60-5	2
1,1-Dichloroethane	53	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-34-3	2
cis-1,2-Dichloroethene	54	ug/L	1	SW8260C	11/11/13 22:41	JGH	156-59-2	2
Chloroform	56	ug/L	1	SW8260C	11/11/13 22:41	JGH	67-66-3	2
1,1,1-Trichloroethane	60	ug/L	1	SW8260C	11/11/13 22:41	JGH	71-55-6	2
Cyclohexane	47	ug/L	1	SW8260C	11/11/13 22:41	JGH	110-82-7	2
4-Methyl-2-pentanone (MIBK)	53	ug/L	10	SW8260C	11/11/13 22:41	JGH	108-10-1	2
2-Hexanone	47	ug/L	10	SW8260C	11/11/13 22:41	JGH	591-78-6	2
Carbon tetrachloride	56	ug/L	1	SW8260C	11/11/13 22:41	JGH	56-23-5	2
Benzene	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	71-43-2	2
1,2-Dichloroethane	56	ug/L	1	SW8260C	11/11/13 22:41	JGH	107-06-2	2
Trichloroethene	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	79-01-6	2
1,2-Dichloropropane	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	78-87-5	2
Bromodichloromethane	54	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-27-4	2
Methyl cyclohexane	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	108-87-2	2
cis-1,3-Dichloropropene	49	ug/L	1	SW8260C	11/11/13 22:41	JGH	10061-01-5	2
Toluene	45	ug/L	1	SW8260C	11/11/13 22:41	JGH	108-88-3	2
trans-1,3-Dichloropropene	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	10061-02-6	2
1,1,2-Trichloroethane	51	ug/L	1	SW8260C	11/11/13 22:41	JGH	79-00-5	2
Tetrachloroethene	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	127-18-4	2
Dibromochloromethane	51	ug/L	1	SW8260C	11/11/13 22:41	JGH	124-48-1	2

1-5883501.d
B-Compound also found in associated method blank
2-Spiked at 50ug/l

Lab Sample ID: S58835.03 (continued)
Sample Tag: MW-04-04 (11052013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	108-90-7	1
1,1,2,2-Tetrachloroethane	51	ug/L	1	SW8260C	11/11/13 22:41	JGH	79-34-5	1
Ethylbenzene	45	ug/L	1	SW8260C	11/11/13 22:41	JGH	100-41-4	1
p,m-Xylene	70	ug/L	2	SW8260C	11/11/13 22:41	JGH		1
o-Xylene	39	ug/L	1	SW8260C	11/11/13 22:41	JGH	95-47-6	1
Styrene	11	ug/L	1	SW8260C	11/11/13 22:41	JGH	100-42-5	1
Isopropylbenzene	48	ug/L	1	SW8260C	11/11/13 22:41	JGH	98-82-8	1
Bromoform	43	ug/L	1	SW8260C	11/11/13 22:41	JGH	75-25-2	1
1,3-Dichlorobenzene	54	ug/L	1	SW8260C	11/11/13 22:41	JGH	541-73-1	1
1,4-Dichlorobenzene	56	ug/L	1	SW8260C	11/11/13 22:41	JGH	106-46-7	1
1,2-Dichlorobenzene	57	ug/L	1	SW8260C	11/11/13 22:41	JGH	95-50-1	1
1,2,4-Trichlorobenzene	62	ug/L	1	SW8260C	11/11/13 22:41	JGH	120-82-1	1
1,2-Dibromoethane	53	ug/L	1	SW8260C	11/11/13 22:41	JGH	106-93-4	1
1,2-Dibromo-3-chloropropane	65	ug/L	1	SW8260C	11/11/13 22:41	JGH	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S58835.04
Sample Tag: MW-91-4 (11052013)
Collected Date/Time: 11/05/2013 16:00
Matrix: Groundwater
COC Reference: 77091

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/13/13 10:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7440-36-0	
Arsenic, Dissolved	0.010	mg/L	0.002	SW6020A	11/18/13 15:49	PER	7440-38-2	
Arsenic	0.011	mg/L	0.002	SW6020A	11/18/13 15:09	PER	7440-38-2	
Barium	0.087	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7440-39-3	
Boron	0.35	mg/L	0.04	SW6020A	11/18/13 15:09	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:09	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 15:49	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:09	PER	7439-92-1	
Manganese	0.323	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 13:55	CCM	7439-97-6	
Nickel	0.012	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:09	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 15:49	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 15:09	PER	7440-62-2	
Zinc	0.013	mg/L	0.005	SW6020A	11/18/13 15:09	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	205-99-2	

Lab Sample ID: S58835.04 (continued)
Sample Tag: MW-91-4 (11052013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 10:29	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	129-00-0	

Lab Sample ID: S58835.04 (continued)
Sample Tag: MW-91-4 (11052013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 10:29	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 19:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 15:45	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 15:45	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 15:45	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	74-87-3	
Vinyl chloride	11	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-34-3	
cis-1,2-Dichloroethene	18	ug/L	1	SW8260C	11/12/13 15:45	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 15:45	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 15:45	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 15:45	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	100-42-5	

Lab Sample ID: S58835.04 (continued)
Sample Tag: MW-91-4 (11052013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 15:45	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58835.05
Sample Tag: Trip Blank (11052013)
Collected Date/Time: 11/05/2013 00:01
Matrix: Liquid
COC Reference: 77091

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:30	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 19:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 18:20	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 18:20	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 18:20	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 18:20	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 18:20	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	79-34-5	

Lab Sample ID: S58835.05 (continued)
Sample Tag: Trip Blank (11052013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 18:20	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:20	JGH	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

77091

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 3 Project#: B006446 6 2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC's	TCL SVOC's	TAL metals (Total)	Dissolved Arsenic, Lead & Vanadium	Special Instructions
58835 .01,.02,.03	11/5/13	13:50	MW-04-04 (11052013)	GW	21	6	9	6					9	6	3	3	MS/MSD
.04	11/5/13	16:00	MW-91-4 (11052013)	GW	7	2	3	2					3	2	1	1	
.05	—	—	TRIP BLANK (11052013)	L	1		1						1				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Arcadis Sampler	DATE 11-5-13	TIME 17:15
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-5-13	TIME 17:25
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	DATE 11-6-13	TIME 0830

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/6/13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/6/13	TIME 930

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58834.01(01)
Generated on 11/18/2013

Report to

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Report Summary

Lab Sample ID(s): S58834.01-S58834.03
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/05/2013
Submitted Date/Time: 11/06/2013 09:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58834.01	MW-13-35 (11513)	Groundwater	11/05/2013 14:15
S58834.02	MW-12-16 (11513)	Groundwater	11/05/2013 16:05
S58834.03	Trip Blank	Liquid	11/05/2013 10:30

Analytical Laboratory Report

Lab Sample ID: S58834.01
Sample Tag: MW-13-35 (11513)
Collected Date/Time: 11/05/2013 14:15
Matrix: Groundwater
COC Reference: 77090

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020A	11/18/13 15:04	PER	7440-38-2	
Barium	0.272	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020A	11/18/13 15:04	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:04	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:04	PER	7439-92-1	
Manganese	0.252	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 13:52	CCM	7439-97-6	
Nickel	0.022	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:04	PER	7440-22-4	
Vanadium	0.005	mg/L	0.004	SW6020A	11/18/13 15:04	PER	7440-62-2	
Zinc	0.018	mg/L	0.005	SW6020A	11/18/13 15:04	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	91-58-7	

Lab Sample ID: S58834.01 (continued)
Sample Tag: MW-13-35 (11513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 07:40	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 07:40	PL	118-74-1	

Lab Sample ID: S58834.01 (continued)
Sample Tag: MW-13-35 (11513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 18:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 02:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 02:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 02:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 02:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 02:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 02:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	120-82-1	

Lab Sample ID: S58834.01 (continued)
Sample Tag: MW-13-35 (11513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 02:21	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58834.02
Sample Tag: MW-12-16 (11513)
Collected Date/Time: 11/05/2013 16:05
Matrix: Groundwater
COC Reference: 77090

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/08/13 15:02	EMR		
Mercury Digestion	Completed			SW7471B	11/07/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
Metal Digestion	Completed			SW3015A	11/18/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7440-36-0	
Arsenic, Dissolved	0.015	mg/L	0.002	SW6020A	11/18/13 15:47	PER	7440-38-2	
Arsenic	0.015	mg/L	0.002	SW6020A	11/18/13 15:08	PER	7440-38-2	
Barium	0.213	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	11/18/13 15:08	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:08	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/18/13 15:47	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/18/13 15:08	PER	7439-92-1	
Manganese	0.308	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/07/13 13:54	CCM	7439-97-6	
Nickel	0.016	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/18/13 15:08	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/18/13 15:47	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/18/13 15:08	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020A	11/18/13 15:08	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	205-99-2	

Lab Sample ID: S58834.02 (continued)
Sample Tag: MW-12-16 (11513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/12/13 08:14	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	129-00-0	

Lab Sample ID: S58834.02 (continued)
Sample Tag: MW-12-16 (11513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/12/13 08:14	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 18:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 02:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 02:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 02:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 02:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 02:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 02:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	100-42-5	

Lab Sample ID: S58834.02 (continued)
Sample Tag: MW-12-16 (11513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 02:41	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58834.03
Sample Tag: Trip Blank
Collected Date/Time: 11/05/2013 10:30
Matrix: Liquid
COC Reference: 77090

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 11:25	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 18:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/08/13 03:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/08/13 03:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/08/13 03:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/08/13 03:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/08/13 03:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	79-34-5	

Lab Sample ID: S58834.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/08/13 03:01	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/08/13 03:01	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
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C.O.C. PAGE # 1 OF 1

77090

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448 1.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☒ ~~Detroit~~ MI ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC's 1,4 D! SIMS	TCL SVOC's	TAL METALS	Dissolved metals	Dissolved As, Pb, V
58834.01	11/5	1415	MW-13-35 (11513)	GW	7	2	3	2					X	X	X		
.02	11/5	1605	MW-12-16 (11513)	GW	7	2	3	2					X	X	X		X
.03	~~11/5~~ 11/5	1030	TRIP BLANK	L	1		1						X				

SS

(*) YES TRIP BLANK 11/5/1030/1HCL

SS

RUN TCL VOC'S 1,4 D! SIMS

SS

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/5/13	TIME 1745
RECEIVED BY: SIGNATURE/ORGANIZATION	PM STORAGE	DATE 11/5/13	TIME 1745
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	MCM	DATE 11-6-13	TIME 830

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-6-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kim George	DATE 11/6/13	TIME 930

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58889.01(01)
Generated on 11/21/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
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Report Summary

Lab Sample ID(s): S58889.01-S58889.03
Project: Lansing Plant 3 Project#: B0064480.2013.00106
Collected Date: 11/07/2013
Submitted Date/Time: 11/08/2013 09:00
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58889.01	MW-13-31	Groundwater	11/07/2013 08:15
S58889.02	MW-14-01	Groundwater	11/07/2013 14:56
S58889.03	Trip Blank	Liquid	11/07/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58889.01
Sample Tag: MW-13-31
Collected Date/Time: 11/07/2013 08:15
Matrix: Groundwater
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	11/21/13 16:44	PER	7440-38-2	
Arsenic	0.004	mg/L	0.002	SW6020A	11/21/13 16:41	PER	7440-38-2	
Barium, Dissolved	0.153	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-39-3	
Barium	0.364	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-39-3	
Boron, Dissolved	0.25	mg/L	0.04	SW6020A	11/21/13 16:44	PER	7440-42-8	
Boron	0.27	mg/L	0.04	SW6020A	11/21/13 16:41	PER	7440-42-8	
Cadmium, Dissolved	0.0009	mg/L	0.0005	SW6020A	11/21/13 16:44	PER	7440-43-9	
Cadmium	0.0033	mg/L	0.0005	SW6020A	11/21/13 16:41	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-47-3	
Chromium	0.018	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-50-8	
Copper	0.117	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/21/13 16:44	PER	7439-92-1	
Lead	0.337	mg/L	0.003	SW6020A	11/21/13 16:41	PER	7439-92-1	
Manganese, Dissolved	0.058	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7439-96-5	
Manganese	0.165	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:56	CCM	7439-97-6	
Mercury	0.0002	mg/L	0.0001	SW7471B	11/11/13 16:44	CCM	7439-97-6	
Nickel, Dissolved	0.024	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-02-0	
Nickel	0.078	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-02-0	
Selenium, Dissolved	0.011	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7782-49-2	
Selenium	0.011	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:44	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:41	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/21/13 16:44	PER	7440-62-2	
Vanadium	0.024	mg/L	0.004	SW6020A	11/21/13 16:41	PER	7440-62-2	
Zinc, Dissolved	0.392	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-66-6	
Zinc	0.883	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-66-6	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 04:23	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/19/13 04:23	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-75-5	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-87-2	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 18:57	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58889.02
Sample Tag: MW-14-01
Collected Date/Time: 11/07/2013 14:56
Matrix: Groundwater
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020A	11/21/13 16:48	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	11/21/13 16:46	PER	7440-38-2	
Barium, Dissolved	0.049	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-39-3	
Barium	0.052	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020A	11/21/13 16:48	PER	7440-42-8	
Boron	0.13	mg/L	0.04	SW6020A	11/21/13 16:46	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:48	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:46	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/21/13 16:48	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 16:46	PER	7439-92-1	
Manganese, Dissolved	0.020	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7439-96-5	
Manganese	0.034	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:00	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:58	CCM	7439-97-6	
Nickel, Dissolved	0.009	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-02-0	
Nickel	0.010	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:48	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:46	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/21/13 16:48	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 16:46	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-66-6	
Zinc	0.014	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-66-6	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-14-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 04:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/19/13 04:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-75-5	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-14-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-87-2	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-14-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 19:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58889.03
Sample Tag: Trip Blank
Collected Date/Time: 11/07/2013 00:01
Matrix: Liquid
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 15:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-34-5	

Lab Sample ID: S58889.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 19:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77081

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.02013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals	TAL Dissolved Metals
58889.01	11/07/13	08:15	MW-13 31	GW	7	X	X	X					3	2	1	1
.02	11/07/13	14:56	MW-04-01	GW	7	X	X	X					3	2	1	1
.03	- -	- -	Trip Blank	- -	- -		X						1			

RELINQUISHED BY: SIGNATURE/ORGANIZATION — Sampler — DATE 11/08/13 TIME 0725

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11/08/13 TIME 0725

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE — TIME

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11.8.13 TIME 0800

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE 11-8-13 TIME

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11/8/13 TIME 900

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

NOTES: TEMP. ON ARRIVAL 5.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58888.01(01)
Generated on 11/21/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
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East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58888.01-S58888.06
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/07/2013
Submitted Date/Time: 11/08/2013 09:00
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58888.01	MW-04-02(3) (11072013)	Groundwater	11/07/2013 09:20
S58888.02	MW-04-03(3) (11072013)	Groundwater	11/07/2013 11:30
S58888.03	MW-02-03(3) (11072013)	Groundwater	11/07/2013 13:50
S58888.04	MW-02-04(3) (11072013)	Groundwater	11/07/2013 16:30
S58888.05	Equipment Blank-3 (11072013)	Groundwater	11/07/2013 17:25
S58888.06	Trip Blank (11072013)	Liquid	11/07/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58888.01
Sample Tag: MW-04-02(3) (11072013)
Collected Date/Time: 11/07/2013 09:20
Matrix: Groundwater
COC Reference: 77078

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020A	11/21/13 16:16	PER	7440-38-2	
Barium	0.096	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7440-39-3	
Boron	0.28	mg/L	0.04	SW6020A	11/21/13 16:16	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:16	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 16:16	PER	7439-92-1	
Manganese	0.265	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:34	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:16	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 16:16	PER	7440-62-2	
Zinc	0.106	mg/L	0.005	SW6020A	11/21/13 16:16	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	91-58-7	

Lab Sample ID: S58888.01 (continued)
Sample Tag: MW-04-02(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 01:36	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 01:36	PL	118-74-1	

Lab Sample ID: S58888.01 (continued)
Sample Tag: MW-04-02(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 20:21	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 16:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 16:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 16:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	74-87-3	
Vinyl chloride	6	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-34-3	
cis-1,2-Dichloroethene	10	ug/L	1	SW8260C	11/12/13 16:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 16:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 16:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 16:46	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	120-82-1	

Lab Sample ID: S58888.01 (continued)
Sample Tag: MW-04-02(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 16:46	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58888.02
Sample Tag: MW-04-03(3) (11072013)
Collected Date/Time: 11/07/2013 11:30
Matrix: Groundwater
COC Reference: 77078

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	11/21/13 16:26	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	11/21/13 16:24	PER	7440-38-2	
Barium, Dissolved	0.190	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7440-39-3	
Barium	0.191	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7440-39-3	
Boron	0.46	mg/L	0.04	SW6020A	11/21/13 16:24	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:26	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:24	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7440-47-3	
Chromium	0.083	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7440-50-8	
Copper	0.006	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/21/13 16:26	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 16:24	PER	7439-92-1	
Manganese, Dissolved	0.182	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7439-96-5	
Manganese	0.204	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:38	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:36	CCM	7439-97-6	
Nickel, Dissolved	0.038	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7440-02-0	
Nickel	0.100	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:26	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:24	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/21/13 16:26	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 16:24	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:26	PER	7440-66-6	
Zinc	0.012	mg/L	0.005	SW6020A	11/21/13 16:24	PER	7440-66-6	

Lab Sample ID: S58888.02 (continued)
Sample Tag: MW-04-03(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 02:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/19/13 02:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	88-75-5	

Lab Sample ID: S58888.02 (continued)
Sample Tag: MW-04-03(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 02:09	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 20:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 17:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 17:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 17:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	74-87-3	
Vinyl chloride	8	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 17:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 17:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	108-87-2	

Lab Sample ID: S58888.02 (continued)
Sample Tag: MW-04-03(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 17:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 17:07	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58888.03
Sample Tag: MW-02-03(3) (11072013)
Collected Date/Time: 11/07/2013 13:50
Matrix: Groundwater
COC Reference: 77078

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR
1	125ml Plastic	None	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	SM3500-Cr B	11/08/13 12:20	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7440-36-0	
Arsenic	0.014	mg/L	0.002	SW6020A	11/21/13 16:29	PER	7440-38-2	
Barium	0.979	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020A	11/21/13 16:29	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:29	PER	7440-43-9	
Chromium	0.019	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7440-47-3	
Cobalt	0.010	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7440-48-4	
Copper	0.010	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7440-50-8	
Lead	0.004	mg/L	0.003	SW6020A	11/21/13 16:29	PER	7439-92-1	
Manganese	0.418	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:40	CCM	7439-97-6	
Nickel	0.057	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7782-49-2	
Silver	0.0005	mg/L	0.0005	SW6020A	11/21/13 16:29	PER	7440-22-4	
Vanadium	0.006	mg/L	0.004	SW6020A	11/21/13 16:29	PER	7440-62-2	
Zinc	0.045	mg/L	0.005	SW6020A	11/21/13 16:29	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	205-99-2	

Lab Sample ID: S58888.03 (continued)
Sample Tag: MW-02-03(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 02:42	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/19/13 02:42	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	129-00-0	

Lab Sample ID: S58888.03 (continued)
Sample Tag: MW-02-03(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 02:42	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 20:57	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 17:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 17:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 17:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 17:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 17:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 17:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	100-42-5	

Lab Sample ID: S58888.03 (continued)
Sample Tag: MW-02-03(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 17:29	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58888.04
Sample Tag: MW-02-04(3) (11072013)
Collected Date/Time: 11/07/2013 16:30
Matrix: Groundwater
COC Reference: 77078

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR
1	125ml Plastic	None	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.05	SM3500-Cr B	11/08/13 12:30	JKB	18540-29-9	X
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7440-36-0	
Arsenic	0.021	mg/L	0.002	SW6020A	11/21/13 16:31	PER	7440-38-2	
Barium	0.161	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020A	11/21/13 16:31	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:31	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7440-47-3	
Cobalt	0.010	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 16:31	PER	7439-92-1	
Manganese	0.076	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:42	CCM	7439-97-6	
Nickel	0.036	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:31	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 16:31	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	11/21/13 16:31	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	50-32-8	

X-Elevated reporting limit due to matrix interference

Lab Sample ID: S58888.04 (continued)
Sample Tag: MW-02-04(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 03:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	108-95-2	

Lab Sample ID: S58888.04 (continued)
Sample Tag: MW-02-04(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 03:16	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 21:16	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 17:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 17:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 17:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 17:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 17:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 17:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	95-47-6	

Lab Sample ID: S58888.04 (continued)
Sample Tag: MW-02-04(3) (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 17:51	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58888.05
Sample Tag: Equipment Blank-3 (11072013)
Collected Date/Time: 11/07/2013 17:25
Matrix: Groundwater
COC Reference: 77078

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/21/13 16:38	PER	7440-38-2	
Barium	0.006	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	11/21/13 16:38	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:38	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 16:38	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:46	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:38	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 16:38	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/21/13 16:38	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	91-58-7	

Lab Sample ID: S58888.05 (continued)
Sample Tag: Equipment Blank-3 (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 03:49	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 03:49	PL	118-74-1	

Lab Sample ID: S58888.05 (continued)
Sample Tag: Equipment Blank-3 (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 21:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 18:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 18:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 18:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 18:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 18:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 18:13	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	120-82-1	

Lab Sample ID: S58888.05 (continued)
Sample Tag: Equipment Blank-3 (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:13	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58888.06
Sample Tag: Trip Blank (11072013)
Collected Date/Time: 11/07/2013 00:01
Matrix: Liquid
COC Reference: 77078

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 21:52	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 18:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 18:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 18:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 18:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 18:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	79-34-5	

Lab Sample ID: S58888.06 (continued)
Sample Tag: Trip Blank (11072013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 18:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:35	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77078

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.0002013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 1,4 Dioxane (SIM)	TCL SVOCs	TAL Metals	Dissolved TAL Metals	Hexavalent Chromium					
58888.01	11/7/13	9:20	MW-04-02(3) (11072013)	GW	6	2	3	1					X	X	X							
.02	11/7/13	11:30	MW-04-03(3) (11072013)	GW	7	2	3	2					X	X	X	X						
.03	11/7/13	13:50	MW-02-03(3) (11072013)	GW	7	3	3	1					X	X	X		X					
.04	11/7/13	16:30	MW-02-04(3) (11072013)	GW	7	3	3	1					X	X	X		X					
.05	11/7/13	17:25	Equipment Blank-3 (11072013)	GW	6	2	3	1					X	X	X							
.06	—	—	Trip Blank (11072013)	L	1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Arcadis	Sampler	DATE 11-7-13 TIME 17:30
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 11-7-13 TIME 1735
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Mes		DATE 11-8-13 TIME 830

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE 11-8-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George		DATE 11/8/13 TIME 900
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58890.01(01)
Generated on 11/21/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58890.01-S58890.07
Project: Lansing Plant 2 Project#: B0064479.2013.00603
Collected Date: 11/07/2013
Submitted Date/Time: 11/08/2013 09:00
Sampled by: Cliff Walls
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58890.01	MW-12-09 (11-7)	Groundwater	11/07/2013 08:30
S58890.02	MW-12-18 (11-7)	Groundwater	11/07/2013 09:30
S58890.03	MW-12-01 (11-7)	Groundwater	11/07/2013 12:00
S58890.04	MW-12-07 (11-7)	Groundwater	11/07/2013 19:00
S58890.05	MW-12-08 (11-7)	Groundwater	11/07/2013 15:00
S58890.06	Duplicate-1	Groundwater	11/07/2013 00:01
S58890.07	Trip Blank	Groundwater	11/07/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S58890.01
Sample Tag: MW-12-09 (11-7)
Collected Date/Time: 11/07/2013 08:30
Matrix: Groundwater
COC Reference: 77082

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020A	11/21/13 17:10	PER	7440-38-2	
Barium	0.056	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7440-39-3	
Boron	0.21	mg/L	0.04	SW6020A	11/21/13 17:10	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:10	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:10	PER	7439-92-1	
Manganese	0.560	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:02	CCM	7439-97-6	
Nickel	0.040	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:10	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:10	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	11/21/13 17:10	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	91-58-7	

Lab Sample ID: S58890.01 (continued)
Sample Tag: MW-12-09 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 05:29	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 05:29	PL	118-74-1	

Lab Sample ID: S58890.01 (continued)
Sample Tag: MW-12-09 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 18:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 17:30	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 17:30	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 17:30	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 17:30	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 17:30	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 17:30	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	120-82-1	

Lab Sample ID: S58890.01 (continued)
Sample Tag: MW-12-09 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 17:30	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58890.02
Sample Tag: MW-12-18 (11-7)
Collected Date/Time: 11/07/2013 09:30
Matrix: Groundwater
COC Reference: 77082

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020A	11/21/13 17:12	PER	7440-38-2	
Barium	0.232	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/21/13 17:12	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:12	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:12	PER	7439-92-1	
Manganese	0.087	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:05	CCM	7439-97-6	
Nickel	0.014	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:12	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:12	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/21/13 17:12	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	91-58-7	

Lab Sample ID: S58890.02 (continued)
Sample Tag: MW-12-18 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 06:02	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 06:02	PL	118-74-1	

Lab Sample ID: S58890.02 (continued)
Sample Tag: MW-12-18 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 19:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 17:51	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 17:51	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 17:51	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 17:51	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 17:51	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 17:51	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	120-82-1	

Lab Sample ID: S58890.02 (continued)
Sample Tag: MW-12-18 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 17:51	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58890.03
Sample Tag: MW-12-01 (11-7)
Collected Date/Time: 11/07/2013 12:00
Matrix: Groundwater
COC Reference: 77082

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
3	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7440-36-0	
Arsenic, Dissolved	0.008	mg/L	0.002	SW6020A	11/21/13 17:17	PER	7440-38-2	
Arsenic	0.010	mg/L	0.002	SW6020A	11/21/13 17:14	PER	7440-38-2	
Barium, Dissolved	0.053	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7440-39-3	
Barium	0.058	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020A	11/21/13 17:17	PER	7440-42-8	
Boron	0.13	mg/L	0.04	SW6020A	11/21/13 17:14	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:17	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:14	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/21/13 17:17	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:14	PER	7439-92-1	
Manganese, Dissolved	0.255	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7439-96-5	
Manganese	0.264	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:09	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:07	CCM	7439-97-6	
Nickel, Dissolved	0.016	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7440-02-0	
Nickel	0.016	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:17	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:14	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/21/13 17:17	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:14	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 17:17	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020A	11/21/13 17:14	PER	7440-66-6	

Lab Sample ID: S58890.03 (continued)
Sample Tag: MW-12-01 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 06:36	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	88-75-5	

Lab Sample ID: S58890.03 (continued)
Sample Tag: MW-12-01 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 06:36	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 19:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 18:13	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 18:13	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 18:13	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 18:13	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 18:13	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	108-87-2	

Lab Sample ID: S58890.03 (continued)
Sample Tag: MW-12-01 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 18:13	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:13	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58890.04
Sample Tag: MW-12-07 (11-7)
Collected Date/Time: 11/07/2013 19:00
Matrix: Groundwater
COC Reference: 77082

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/21/13 17:19	PER	7440-38-2	
Barium	0.034	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/21/13 17:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:19	PER	7439-92-1	
Manganese	0.005	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:11	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:19	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/21/13 17:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	91-58-7	

Lab Sample ID: S58890.04 (continued)
Sample Tag: MW-12-07 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 07:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 07:09	PL	118-74-1	

Lab Sample ID: S58890.04 (continued)
Sample Tag: MW-12-07 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 19:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 18:35	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 18:35	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 18:35	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 18:35	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 18:35	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 18:35	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	120-82-1	

Lab Sample ID: S58890.04 (continued)
Sample Tag: MW-12-07 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:35	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58890.05
Sample Tag: MW-12-08 (11-7)
Collected Date/Time: 11/07/2013 15:00
Matrix: Groundwater
COC Reference: 77082

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7440-36-0	
Arsenic	0.025	mg/L	0.002	SW6020A	11/21/13 17:21	PER	7440-38-2	
Barium	0.249	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/21/13 17:21	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:21	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:21	PER	7439-92-1	
Manganese	0.496	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:13	CCM	7439-97-6	
Nickel	0.059	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:21	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:21	PER	7440-62-2	
Zinc	0.035	mg/L	0.005	SW6020A	11/21/13 17:21	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	91-58-7	

Lab Sample ID: S58890.05 (continued)
Sample Tag: MW-12-08 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 15:04	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 15:04	PL	118-74-1	

Lab Sample ID: S58890.05 (continued)
Sample Tag: MW-12-08 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 20:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 18:57	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 18:57	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 18:57	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 18:57	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 18:57	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 18:57	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	120-82-1	

Lab Sample ID: S58890.05 (continued)
Sample Tag: MW-12-08 (11-7)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 18:57	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58890.06
Sample Tag: Duplicate-1
Collected Date/Time: 11/07/2013 00:01
Matrix: Groundwater
COC Reference: 77082

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020A	11/21/13 17:24	PER	7440-38-2	
Barium	0.220	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/21/13 17:24	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:24	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:24	PER	7439-92-1	
Manganese	0.085	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:15	CCM	7439-97-6	
Nickel	0.014	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:24	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:24	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/21/13 17:24	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	91-58-7	

Lab Sample ID: S58890.06 (continued)
Sample Tag: Duplicate-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 15:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 15:38	PL	118-74-1	

Lab Sample ID: S58890.06 (continued)
Sample Tag: Duplicate-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 20:19	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 19:19	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 19:19	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 19:19	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 19:19	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 19:19	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 19:19	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	120-82-1	

Lab Sample ID: S58890.06 (continued)
Sample Tag: Duplicate-1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:19	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58890.07
Sample Tag: Trip Blank
Collected Date/Time: 11/07/2013 07:00
Matrix: Groundwater
COC Reference: 77082

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 20:37	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 19:41	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 19:41	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 19:41	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 19:41	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 19:41	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	79-34-5	

Lab Sample ID: S58890.07 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 19:41	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 19:41	JGH	96-12-8	

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C.O.C. PAGE # 1 OF 1

77082

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☑ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 2 Project#: B00644 .2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: [signature] CLAFLIN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC MI List	TAL METAL	Mass CAT TAL Metal	Mass CAT Assc. Vanadium	SVOCs
58890.01	11-7	8:30	MW-12.09 (11-7)	GW	6	2	3	1					X	X			X
.02	11-7	9:30	MW-12.18 (11-7)	GW	6	2	3	1					X	X			X
.03	11-7	12:00	MW-12.01 (11-7)	GW	8	2	3	3					X	X	X	X	X
.04	11-7	14:30	MW-12.07 (11-7)	GW	6	2	3	1					X	X			X
.05	11-7	15:00	MW-12.08 (11-7)	GW	6	2	3	1					X	X			X
.06	11-7		DUPLICATE-1	GW	6	2	3	1					X	X			X
.07	11-7	7:00	TRIP BLANK	GW	1		1						X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE 11-7	TIME 17:30
RECEIVED BY: SIGNATURE/ORGANIZATION	PM STORAGE	DATE 11-7	TIME 17:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PM STORAGE	DATE 11-5	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	[signature]	DATE 11-8-13	TIME 8:40

RELINQUISHED BY: SIGNATURE/ORGANIZATION	[signature]	DATE 11-8-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/8/13	TIME 900
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58891.01(01)
Generated on 11/22/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

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Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58891.01-S58891.05
Project: Lansing Plant 6 Project#: B0064481.2013.00106
Collected Date: 11/07/2013
Submitted Date/Time: 11/08/2013 09:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58891.01	MW-12-10 (11713)	Groundwater	11/07/2013 10:00
S58891.02	MW-04-05(6) (11713)	Groundwater	11/07/2013 12:20
S58891.03	MW-04-06(R) (11713)	Groundwater	11/07/2013 14:35
S58891.04	MW-03-01 (11713)	Groundwater	11/07/2013 16:30
S58891.05	Trip Blank	Liquid	11/07/2013 07:15

Analytical Laboratory Report

Lab Sample ID: S58891.01
Sample Tag: MW-12-10 (11713)
Collected Date/Time: 11/07/2013 10:00
Matrix: Groundwater
COC Reference: 77077

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020A	11/21/13 17:26	PER	7440-38-2	
Barium	0.187	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020A	11/21/13 17:26	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:26	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:26	PER	7439-92-1	
Manganese	1.04	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 13:55	CCM	7439-97-6	
Nickel	0.061	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:26	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:26	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/21/13 17:26	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	91-58-7	

Lab Sample ID: S58891.01 (continued)
Sample Tag: MW-12-10 (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 16:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 16:12	PL	118-74-1	

Lab Sample ID: S58891.01 (continued)
Sample Tag: MW-12-10 (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 20:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 20:03	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 20:03	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 20:03	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 20:03	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 20:03	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 20:03	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	120-82-1	

Lab Sample ID: S58891.01 (continued)
Sample Tag: MW-12-10 (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 20:03	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58891.02
Sample Tag: MW-04-05(6) (11713)
Collected Date/Time: 11/07/2013 12:20
Matrix: Groundwater
COC Reference: 77077

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7440-36-0	
Arsenic	0.024	mg/L	0.002	SW6020A	11/21/13 17:28	PER	7440-38-2	
Barium	0.873	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020A	11/21/13 17:28	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:28	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:28	PER	7439-92-1	
Manganese	0.466	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 13:57	CCM	7439-97-6	
Nickel	0.033	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7440-02-0	
Selenium	0.007	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:28	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:28	PER	7440-62-2	
Zinc	0.011	mg/L	0.005	SW6020A	11/21/13 17:28	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	91-58-7	

Lab Sample ID: S58891.02 (continued)
Sample Tag: MW-04-05(6) (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 16:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	98-95-3	
di-n-Octyl phthalate	2	ug/L	1	SW8270D	11/19/13 16:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 16:46	PL	118-74-1	

Lab Sample ID: S58891.02 (continued)
Sample Tag: MW-04-05(6) (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 21:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 20:25	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 20:25	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 20:25	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 20:25	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 20:25	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 20:25	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	120-82-1	

Lab Sample ID: S58891.02 (continued)
Sample Tag: MW-04-05(6) (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 20:25	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58891.03
Sample Tag: MW-04-06(R) (11713)
Collected Date/Time: 11/07/2013 14:35
Matrix: Groundwater
COC Reference: 77077

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7440-36-0	
Arsenic, Dissolved	0.021	mg/L	0.002	SW6020A	11/22/13 12:55	PER	7440-38-2	
Arsenic	0.021	mg/L	0.002	SW6020A	11/22/13 12:53	PER	7440-38-2	
Barium, Dissolved	0.379	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7440-39-3	
Barium	0.381	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020A	11/22/13 12:55	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020A	11/22/13 12:53	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 12:55	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 12:53	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7440-47-3	
Chromium	0.015	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7440-50-8	
Copper	0.019	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/22/13 12:55	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 12:53	PER	7439-92-1	
Manganese, Dissolved	0.117	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7439-96-5	
Manganese	0.123	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:01	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 13:59	CCM	7439-97-6	
Nickel, Dissolved	0.051	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7440-02-0	
Nickel	0.060	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7782-49-2	
Selenium	0.006	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 12:55	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 12:53	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/22/13 12:55	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 12:53	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020A	11/22/13 12:55	PER	7440-66-6	
Zinc	0.006	mg/L	0.005	SW6020A	11/22/13 12:53	PER	7440-66-6	

Lab Sample ID: S58891.03 (continued)
Sample Tag: MW-04-06(R) (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 17:19	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	88-75-5	

Lab Sample ID: S58891.03 (continued)
Sample Tag: MW-04-06(R) (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 17:19	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/15/13 22:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 20:47	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 20:47	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 20:47	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 20:47	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 20:47	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	108-87-2	

Lab Sample ID: S58891.03 (continued)
Sample Tag: MW-04-06(R) (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 20:47	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 20:47	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58891.04
Sample Tag: MW-03-01 (11713)
Collected Date/Time: 11/07/2013 16:30
Matrix: Groundwater
COC Reference: 77077

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7440-36-0	
Arsenic, Dissolved	0.044	mg/L	0.002	SW6020A	11/22/13 13:05	PER	7440-38-2	
Arsenic	0.047	mg/L	0.002	SW6020A	11/22/13 13:03	PER	7440-38-2	
Barium	0.364	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	11/22/13 13:03	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:03	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7440-48-4	
Copper	0.005	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/22/13 13:05	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:03	PER	7439-92-1	
Manganese	0.294	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:02	CCM	7439-97-6	
Nickel	0.049	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7440-02-0	
Selenium	0.008	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:03	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/22/13 13:05	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:03	PER	7440-62-2	
Zinc	0.015	mg/L	0.005	SW6020A	11/22/13 13:03	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	205-99-2	

Lab Sample ID: S58891.04 (continued)
Sample Tag: MW-03-01 (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 17:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	129-00-0	

Lab Sample ID: S58891.04 (continued)
Sample Tag: MW-03-01 (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 17:53	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/18/13 21:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 21:08	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 21:08	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 21:08	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 21:08	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 21:08	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 21:08	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	100-42-5	

Lab Sample ID: S58891.04 (continued)
Sample Tag: MW-03-01 (11713)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 21:08	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58891.05
Sample Tag: Trip Blank
Collected Date/Time: 11/07/2013 07:15
Matrix: Liquid
COC Reference: 77077

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/12/13 14:25	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 15:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/11/13 21:30	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/11/13 21:30	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/11/13 21:30	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/11/13 21:30	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/11/13 21:30	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	79-34-5	

Lab Sample ID: S58891.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/11/13 21:30	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/11/13 21:30	JGH	96-12-8	

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C.O.C. PAGE # 1 OF 1

77077

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B00644 Ej.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☒ MI ☐ ~~Detroit~~ ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1,4-D + 8260 SIM	TCL SVOCs	TAL METALS	DISS METALS	D's Arsenic, Barium
58891.01	11/7	1000	MW-12-10 (11713)	GW	6	2	3	1					X	X	X		
.02	11/7	1220	MW-04-05 (11713)	GW	6	2	3	1					X	X	X		
.03	11/7	1435	~~MW-04-06 (11713)~~ MW-04-06(R) (11713)	GW	7	2	3	2					X	X	X	X	X
.04	11/7	1650	MW-03-01 (11713)	GW	7	2	3	2					X	X	X		X
.05	11/7	0715	TRIP BLANK	L	1		1						X				

SS

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/7/13	TIME 1600
RECEIVED BY: SIGNATURE/ORGANIZATION Pm Storage		DATE 11/7/13	TIME 1800
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/8/13	TIME 0800

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-8-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Kevin George		DATE 11/8/13	TIME 900
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58919.01(01)
Generated on 11/22/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

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Report Summary

Lab Sample ID(s): S58919.01-S58919.04
Project: Lansing Plant 3 Project#: B0064480.2013.00106
Collected Date: 11/08/2013
Submitted Date/Time: 11/08/2013 16:00
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58919.01	MW-13-32	Groundwater	11/08/2013 09:26
S58919.02	Equipment Blank-4	Liquid	11/08/2013 10:40
S58919.03	MW-91-5	Groundwater	11/08/2013 12:45
S58919.04	Trip Blank	Liquid	11/08/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58919.01
Sample Tag: MW-13-32
Collected Date/Time: 11/08/2013 09:26
Matrix: Groundwater
COC Reference: 77087

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020A	11/22/13 13:16	PER	7440-38-2	
Barium	0.143	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7440-39-3	
Boron	0.32	mg/L	0.04	SW6020A	11/22/13 13:16	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:16	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7440-48-4	
Copper	0.016	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:16	PER	7439-92-1	
Manganese	0.737	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:22	CCM	7439-97-6	
Nickel	0.241	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:16	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:16	PER	7440-62-2	
Zinc	0.035	mg/L	0.005	SW6020A	11/22/13 13:16	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	91-58-7	

Lab Sample ID: S58919.01 (continued)
Sample Tag: MW-13-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 18:26	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/19/13 18:26	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 18:26	PL	118-74-1	

Lab Sample ID: S58919.01 (continued)
Sample Tag: MW-13-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 18:04	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 15:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 15:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 15:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 15:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 15:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 15:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	120-82-1	

Lab Sample ID: S58919.01 (continued)
Sample Tag: MW-13-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 15:59	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58919.02
Sample Tag: Equipment Blank-4
Collected Date/Time: 11/08/2013 10:40
Matrix: Liquid
COC Reference: 77087

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/21/13 17:06	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	11/21/13 17:06	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:06	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 17:06	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:24	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 17:06	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 17:06	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/21/13 17:06	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	91-58-7	

Lab Sample ID: S58919.02 (continued)
Sample Tag: Equipment Blank-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 19:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 19:00	PL	118-74-1	

Lab Sample ID: S58919.02 (continued)
Sample Tag: Equipment Blank-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 18:22	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 16:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 16:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 16:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 16:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 16:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 16:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	120-82-1	

Lab Sample ID: S58919.02 (continued)
Sample Tag: Equipment Blank-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 16:21	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58919.03
Sample Tag: MW-91-5
Collected Date/Time: 11/08/2013 12:45
Matrix: Groundwater
COC Reference: 77087

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020A	11/22/13 13:21	PER	7440-38-2	
Barium	0.331	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020A	11/22/13 13:21	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:21	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:21	PER	7439-92-1	
Manganese	0.088	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:26	CCM	7439-97-6	
Nickel	0.007	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:21	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:21	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	11/22/13 13:21	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	91-58-7	

Lab Sample ID: S58919.03 (continued)
Sample Tag: MW-91-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 19:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/19/13 19:33	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 19:33	PL	118-74-1	

Lab Sample ID: S58919.03 (continued)
Sample Tag: MW-91-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 18:40	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 16:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 16:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 16:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 16:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 16:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 16:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	120-82-1	

Lab Sample ID: S58919.03 (continued)
Sample Tag: MW-91-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 16:42	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58919.04
Sample Tag: Trip Blank
Collected Date/Time: 11/08/2013 00:01
Matrix: Liquid
COC Reference: 77087

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 18:59	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 17:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 17:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 17:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 17:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 17:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	79-34-5	

Lab Sample ID: S58919.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 17:04	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 17:04	WAT	96-12-8	

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

77087

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 3 Project#: B006440.0002013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals
58919.01	11/08/13	09:26	MW-13-32	GW	6	X	X	X					3	2	1
.02	11/08/13	10:40	Equipment Blank-4	L	6	X	X	X					3	2	1
.03	11/08/13	12:45	MW-91-S	GW	6	X	X	X					3	2	1
.04	--	--	Trip Blank	L	1		X						1		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE	TIME
		11/08/2013	14:20
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		11/8/13	14:20
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		11/8/13	1520
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
MOX		11.8.13	1520

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE	TIME
		11/8/13	1600

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58920.01(01)
Generated on 11/22/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58920.01-S58920.04
Project: Lansing Plant 3 Project#: B0064480.2013.00106
Collected Date: 11/08/2013
Submitted Date/Time: 11/08/2013 16:00
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58920.01	MW-12-20 (11082013)	Groundwater	11/08/2013 10:10
S58920.02	MW-13-26 (11082013)	Groundwater	11/08/2013 12:50
S58920.03	Dup-03 (11082013)	Groundwater	11/08/2013 00:01
S58920.04	Trip Blank (11082013)	Liquid	11/08/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58920.01
Sample Tag: MW-12-20 (11082013)
Collected Date/Time: 11/08/2013 10:10
Matrix: Groundwater
COC Reference: 77080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020A	11/22/13 13:26	PER	7440-38-2	
Arsenic	0.004	mg/L	0.002	SW6020A	11/22/13 13:23	PER	7440-38-2	
Barium, Dissolved	0.142	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7440-39-3	
Barium	0.154	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020A	11/22/13 13:26	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020A	11/22/13 13:23	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:26	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:23	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7440-47-3	
Chromium	0.037	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7440-50-8	
Copper	0.023	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/22/13 13:26	PER	7439-92-1	
Lead	0.006	mg/L	0.003	SW6020A	11/22/13 13:23	PER	7439-92-1	
Manganese, Dissolved	0.131	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7439-96-5	
Manganese	0.423	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:30	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:28	CCM	7439-97-6	
Nickel, Dissolved	0.019	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7440-02-0	
Nickel	0.028	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:26	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:23	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/22/13 13:26	PER	7440-62-2	
Vanadium	0.008	mg/L	0.004	SW6020A	11/22/13 13:23	PER	7440-62-2	
Zinc, Dissolved	0.010	mg/L	0.005	SW6020A	11/22/13 13:26	PER	7440-66-6	
Zinc	0.034	mg/L	0.005	SW6020A	11/22/13 13:23	PER	7440-66-6	

Lab Sample ID: S58920.01 (continued)
Sample Tag: MW-12-20 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 20:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	88-75-5	

Lab Sample ID: S58920.01 (continued)
Sample Tag: MW-12-20 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 20:07	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 19:17	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 19:26	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 19:26	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 19:26	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 19:26	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 19:26	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	108-87-2	

Lab Sample ID: S58920.01 (continued)
Sample Tag: MW-12-20 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 19:26	WAT		
o-Xylene	1	ug/L	1	SW8260C	11/13/13 19:26	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 19:26	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58920.02
Sample Tag: MW-13-26 (11082013)
Collected Date/Time: 11/08/2013 12:50
Matrix: Groundwater
COC Reference: 77080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020A	11/22/13 13:28	PER	7440-38-2	
Barium	0.032	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	11/22/13 13:28	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:28	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:28	PER	7439-92-1	
Manganese	0.137	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:32	CCM	7439-97-6	
Nickel	0.025	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:28	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:28	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 13:28	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	91-58-7	

Lab Sample ID: S58920.02 (continued)
Sample Tag: MW-13-26 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 20:40	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 20:40	PL	118-74-1	

Lab Sample ID: S58920.02 (continued)
Sample Tag: MW-13-26 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 19:35	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 19:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 19:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 19:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 19:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 19:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 19:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	120-82-1	

Lab Sample ID: S58920.02 (continued)
Sample Tag: MW-13-26 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 19:48	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58920.03
Sample Tag: Dup-03 (11082013)
Collected Date/Time: 11/08/2013 00:01
Matrix: Groundwater
COC Reference: 77080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020A	11/22/13 13:30	PER	7440-38-2	
Barium	0.032	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	11/22/13 13:30	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:30	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:30	PER	7439-92-1	
Manganese	0.136	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:34	CCM	7439-97-6	
Nickel	0.024	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:30	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:30	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 13:30	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	91-58-7	

Lab Sample ID: S58920.03 (continued)
Sample Tag: Dup-03 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 21:14	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	98-95-3	
di-n-Octyl phthalate	2	ug/L	1	SW8270D	11/19/13 21:14	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 21:14	PL	118-74-1	

Lab Sample ID: S58920.03 (continued)
Sample Tag: Dup-03 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 19:53	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/14/13 19:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/14/13 19:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/14/13 19:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/14/13 19:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/14/13 19:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/14/13 19:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	120-82-1	

Lab Sample ID: S58920.03 (continued)
Sample Tag: Dup-03 (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/14/13 19:10	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58920.04
Sample Tag: Trip Blank (11082013)
Collected Date/Time: 11/08/2013 00:01
Matrix: Liquid
COC Reference: 77080

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 20:11	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/14/13 19:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/14/13 19:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/14/13 19:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/14/13 19:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/14/13 19:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	79-34-5	

Lab Sample ID: S58920.04 (continued)
Sample Tag: Trip Blank (11082013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/14/13 19:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/14/13 19:32	WAT	96-12-8	

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

77080

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 1,4 Dioxane 8260 SIM	TCL SVOCs	TAL METALS	DISSOLVED TAL METALS
58920.01	11/5/13	10:10	MW-12-20 (11082013)	GW	7	2	3	2					X	X	X	X
.02	11/5/13	12:50	MW-13-26 (11082013)	GW	6	2	3	1					X	X	X	
.03	11/5/13	—	Dup-03 (11082013)	GW	6	2	3	1					X	X	X	
.04	—	—	Trip Blank (11082013)	L	1		1						X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	X Sampler	DATE 11-8-13	TIME 1520
RECEIVED BY: SIGNATURE/ORGANIZATION	MSX	DATE 11-8-13	TIME 1520
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/8/13	TIME 1000
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58921.01(01)
Generated on 11/22/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58921.01-S58921.04
Project: Lansing Plant 2 Project#: B0064479.2013.00603
Collected Date: 11/08/2013
Submitted Date/Time: 11/08/2013 16:00
Sampled by: Cliff Walls
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58921.01	P2-MW-02 (11-8)	Groundwater	11/08/2013 08:30
S58921.02	P2-SB-20 (11-8)	Groundwater	11/08/2013 10:30
S58921.03	MW-12-06 (11-8)	Groundwater	11/08/2013 13:00
S58921.04	Trip Blank	Groundwater	11/08/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S58921.01
Sample Tag: P2-MW-02 (11-8)
Collected Date/Time: 11/08/2013 08:30
Matrix: Groundwater
COC Reference: 78963

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	11/22/13 13:47	PER	7440-38-2	
Arsenic	0.002	mg/L	0.002	SW6020A	11/22/13 13:44	PER	7440-38-2	
Barium, Dissolved	0.053	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7440-39-3	
Barium	0.056	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7440-39-3	
Boron, Dissolved	Not detected	mg/L	0.04	SW6020A	11/22/13 13:47	PER	7440-42-8	
Boron	Not detected	mg/L	0.04	SW6020A	11/22/13 13:44	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:47	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:44	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7440-47-3	
Chromium	0.008	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7440-50-8	
Copper	0.010	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/22/13 13:47	PER	7439-92-1	
Lead	0.006	mg/L	0.003	SW6020A	11/22/13 13:44	PER	7439-92-1	
Manganese, Dissolved	0.018	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7439-96-5	
Manganese	0.079	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:40	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:36	CCM	7439-97-6	
Nickel, Dissolved	0.005	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7440-02-0	
Nickel	0.010	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:47	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:44	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/22/13 13:47	PER	7440-62-2	
Vanadium	0.004	mg/L	0.004	SW6020A	11/22/13 13:44	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 13:47	PER	7440-66-6	
Zinc	0.015	mg/L	0.005	SW6020A	11/22/13 13:44	PER	7440-66-6	

Lab Sample ID: S58921.01 (continued)
Sample Tag: P2-MW-02 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 21:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	88-75-5	

Lab Sample ID: S58921.01 (continued)
Sample Tag: P2-MW-02 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 21:47	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 20:29	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 20:54	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 20:54	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 20:54	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 20:54	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 20:54	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	108-87-2	

Lab Sample ID: S58921.01 (continued)
Sample Tag: P2-MW-02 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 20:54	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 20:54	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58921.02
Sample Tag: P2-SB-20 (11-8)
Collected Date/Time: 11/08/2013 10:30
Matrix: Groundwater
COC Reference: 78963

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/12/13 10:50	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7440-36-0	
Arsenic	0.027	mg/L	0.002	SW6020A	11/22/13 13:51	PER	7440-38-2	
Barium	0.005	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7440-39-3	
Boron	0.17	mg/L	0.04	SW6020A	11/22/13 13:51	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:51	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7440-48-4	
Copper	0.006	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:51	PER	7439-92-1	
Manganese	0.013	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/12/13 14:38	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:51	PER	7440-22-4	
Vanadium	0.014	mg/L	0.004	SW6020A	11/22/13 13:51	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 13:51	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270D	11/19/13 22:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	91-58-7	

Lab Sample ID: S58921.02 (continued)
Sample Tag: P2-SB-20 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 22:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 22:20	PL	118-74-1	

Lab Sample ID: S58921.02 (continued)
Sample Tag: P2-SB-20 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 20:47	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 21:15	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 21:15	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 21:15	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 21:15	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 21:15	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 21:15	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	120-82-1	

Lab Sample ID: S58921.02 (continued)
Sample Tag: P2-SB-20 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 21:15	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58921.03
Sample Tag: MW-12-06 (11-8)
Collected Date/Time: 11/08/2013 13:00
Matrix: Groundwater
COC Reference: 78963

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/13/13 11:20	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020A	11/22/13 13:53	PER	7440-38-2	
Barium	0.064	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7440-39-3	
Boron	0.19	mg/L	0.04	SW6020A	11/22/13 13:53	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:53	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:53	PER	7439-92-1	
Manganese	0.066	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/13/13 15:09	CCM	7439-97-6	
Nickel	0.006	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:53	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:53	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 13:53	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	91-58-7	

Lab Sample ID: S58921.03 (continued)
Sample Tag: MW-12-06 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/20/13 19:52	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/20/13 19:52	PL	118-74-1	

Lab Sample ID: S58921.03 (continued)
Sample Tag: MW-12-06 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 21:05	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 21:37	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 21:37	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 21:37	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 21:37	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 21:37	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 21:37	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	120-82-1	

Lab Sample ID: S58921.03 (continued)
Sample Tag: MW-12-06 (11-8)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 21:37	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58921.04
Sample Tag: Trip Blank
Collected Date/Time: 11/08/2013 07:00
Matrix: Groundwater
COC Reference: 78963

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 21:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 21:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 21:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 21:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 21:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 21:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	79-34-5	

Lab Sample ID: S58921.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 21:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 21:59	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

78963

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1910 | FAX NO.: | P.O. NO.: PO
E-MAIL ADDRESS: randy.christensen@arcadis-us.com | QUOTE NO.: Task#

INVOICE TO

CONTACT NAME: [redacted] c/o | ☐ SAME
COMPANY: [redacted] c/o
ADDRESS: [redacted] c/o
CITY: [redacted] c/o | STATE: MI | ZIP CODE: 48198
PHONE NO.: [redacted] | E-MAIL ADDRESS: [redacted]@[redacted].org

PROJECT NO./NAME: Lansing Plant 2 Project#: B00644 .2012.
SAMPLER(S) PLEASE PRINT/SIGN NAME: Cliff Wallis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	c/w	c/w	c/w	c/w	TCL VOC 11-1-4 SIMS	SVOCs	TAL Metals	TAL Metals Miss
58921.01	11-8	8:30	P2 MW-02 (11-8)	GW	7	2	3	2									X	X	X	X
.02	11-8	10:30	P2-SB-20 (11-8)	GW	6	2	3	1									X	X	X	
.03	11-8	13:00	MW-12-06 (11-8)	GW	6	2	3	1									X	X	X	
.04	11-8	7:00	TRIP BLANK	GW	1		1													

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
		11-8	14:20
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		11/8/13	14:20
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		11/8/13	15:20
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Mod		11-8-13	15:20

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Kevin George	11/8/13	1600

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 5.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev

Analytical Laboratory Report

Report ID: S58922.01(01)
Generated on 11/22/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58922.01-S58922.04
Project: Lansing Plant 6 Project#: B0064481.2013.00106
Collected Date: 11/08/2013
Submitted Date/Time: 11/08/2013 16:00
Sampled by: Unknown
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58922.01	MW-03-02 (11813)	Groundwater	11/08/2013 10:25
S58922.02	MW-12-13 (11813)	Groundwater	11/08/2013 12:45
S58922.03	Dup #2	Groundwater	11/08/2013 00:01
S58922.04	Trip Blank	Liquid	11/08/2013 07:30

Analytical Laboratory Report

Lab Sample ID: S58922.01
Sample Tag: MW-03-02 (11813)
Collected Date/Time: 11/08/2013 10:25
Matrix: Groundwater
COC Reference: 77076

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/13/13 11:20	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7440-36-0	
Arsenic	0.025	mg/L	0.002	SW6020A	11/22/13 13:55	PER	7440-38-2	
Barium	0.536	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020A	11/22/13 13:55	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:55	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:55	PER	7439-92-1	
Manganese	0.145	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/13/13 15:11	CCM	7439-97-6	
Nickel	0.023	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:55	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:55	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 13:55	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	91-58-7	

Lab Sample ID: S58922.01 (continued)
Sample Tag: MW-03-02 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/20/13 20:26	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/20/13 20:26	PL	118-74-1	

Lab Sample ID: S58922.01 (continued)
Sample Tag: MW-03-02 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 21:41	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 22:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 22:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 22:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 22:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 22:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 22:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	120-82-1	

Lab Sample ID: S58922.01 (continued)
Sample Tag: MW-03-02 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 22:21	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58922.02
Sample Tag: MW-12-13 (11813)
Collected Date/Time: 11/08/2013 12:45
Matrix: Groundwater
COC Reference: 77076

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/13/13 11:20	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020A	11/22/13 13:57	PER	7440-38-2	
Barium	0.161	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/22/13 13:57	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:57	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:57	PER	7439-92-1	
Manganese	0.132	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/13/13 15:13	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:57	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:57	PER	7440-62-2	
Zinc	0.011	mg/L	0.005	SW6020A	11/22/13 13:57	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	91-58-7	

Lab Sample ID: S58922.02 (continued)
Sample Tag: MW-12-13 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/20/13 20:59	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	98-95-3	
di-n-Octyl phthalate	1	ug/L	1	SW8270D	11/20/13 20:59	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/20/13 20:59	PL	118-74-1	

Lab Sample ID: S58922.02 (continued)
Sample Tag: MW-12-13 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 21:59	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 22:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 22:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 22:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 22:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 22:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 22:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	120-82-1	

Lab Sample ID: S58922.02 (continued)
Sample Tag: MW-12-13 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 22:43	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58922.03
Sample Tag: Dup #2
Collected Date/Time: 11/08/2013 00:01
Matrix: Groundwater
COC Reference: 77076

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
1	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/14/13 14:09	EMR		
Mercury Digestion	Completed			SW7471B	11/13/13 11:20	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020A	11/22/13 13:59	PER	7440-38-2	
Barium	0.152	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/22/13 13:59	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:59	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 13:59	PER	7439-92-1	
Manganese	0.128	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/13/13 15:15	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 13:59	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 13:59	PER	7440-62-2	
Zinc	0.011	mg/L	0.005	SW6020A	11/22/13 13:59	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	91-58-7	

Lab Sample ID: S58922.03 (continued)
Sample Tag: Dup #2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/20/13 21:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/20/13 21:33	PL	118-74-1	

Lab Sample ID: S58922.03 (continued)
Sample Tag: Dup #2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 22:17	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 23:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 23:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 23:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 23:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 23:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 23:04	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	120-82-1	

Lab Sample ID: S58922.03 (continued)
Sample Tag: Dup #2

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 23:04	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58922.04
Sample Tag: Trip Blank
Collected Date/Time: 11/08/2013 07:30
Matrix: Liquid
COC Reference: 77076

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/14/13 08:55	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/19/13 22:35	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/13/13 23:26	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/13/13 23:26	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/13/13 23:26	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/13/13 23:26	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/13/13 23:26	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	79-34-5	

Lab Sample ID: S58922.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/13/13 23:26	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/13/13 23:26	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77076

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	**Randy Christensen**
COMPANY	**ARCADIS**
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	**ARCADIS**
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448\.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☒ Michigan ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE (YEAR 2013)	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1-4dl 8260 SIM	TCL SVOC	TAL Metals
5892201	11/8	1025	MW-03-02 (11813)	GW	6	2	3	1					X	X	X
.02	11/8	1245	MW-12-13 (11813)	GW	6	2	3	1					X	X	X
.03	11/8		DUPH 2	GW	6	2	3	1					X	X	X
.04	11/8	0730	TRIP BLANK	L	1		1						X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/8/13	TIME 14:45
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/8/13	TIME 14:45
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11/8/13	TIME 1520
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-8-13	TIME 1520

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin Geauge	DATE 11/8/13	TIME 1600
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58943.01(01)
Generated on 11/26/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

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Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

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Report Summary

Lab Sample ID(s): S58943.01-S58943.09
Project: Lansing Plant 2 Project#: B0064479.2013.00603
Collected Date: 11/11/2013
Submitted Date/Time: 11/12/2013 09:45
Sampled by: Cliff Walls
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (9 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58943.01	MW-12-05 (11-11)	Groundwater	11/11/2013 08:30
S58943.02	MW-01(2) (11-11)	Groundwater	11/11/2013 10:30
S58943.03	MW-02(2) (11-11)	Groundwater	11/11/2013 12:00
S58943.04	MW-12-17 (11-11)	Groundwater	11/11/2013 15:00
S58943.05	Duplicate-5	Groundwater	11/11/2013 00:01
S58943.06	Equip Blank-5	Groundwater	11/11/2013 00:01
S58943.07	Trip Blank	Groundwater	11/11/2013 07:00
S58943.08	MW-12-05 (11-11) MS	Groundwater	11/11/2013 08:30
S58943.09	MW-12-05 (11-11) MSD	Groundwater	11/11/2013 08:30

Analytical Laboratory Report

Lab Sample ID: S58943.01
Sample Tag: MW-12-05 (11-11)
Collected Date/Time: 11/11/2013 08:30
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/22/13 16:29	PER	7440-38-2	
Barium	0.034	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020A	11/22/13 16:29	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:29	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7440-48-4	
Copper	0.006	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 16:29	PER	7439-92-1	
Manganese	0.091	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:50	CCM	7439-97-6	
Nickel	0.038	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:29	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 16:29	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	11/22/13 16:29	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	91-58-7	

Lab Sample ID: S58943.01 (continued)
Sample Tag: MW-12-05 (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/25/13 23:17	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/25/13 23:17	PL	118-74-1	

Lab Sample ID: S58943.01 (continued)
Sample Tag: MW-12-05 (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 18:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 16:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 16:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 16:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 16:52	WAT	108-10-1	S
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 16:52	WAT	591-78-6	S
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	56-23-5	S
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	71-43-2	S
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	107-06-2	S
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	79-01-6	S
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	78-87-5	S
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-27-4	S
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	108-87-2	S
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	10061-01-5	S
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	108-88-3	S
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	10061-02-6	S
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	79-00-5	S
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	127-18-4	S
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 16:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	95-50-1	

S-Surrogate recovery outside of control limits

Lab Sample ID: S58943.01 (continued)
Sample Tag: MW-12-05 (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 16:52	WAT	96-12-8	
TCL Volatile Organics 8260 (Replicate 01)								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/25/13 17:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/25/13 17:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/25/13 17:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/25/13 17:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/25/13 17:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/25/13 17:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	541-73-1	

Lab Sample ID: S58943.01 (continued)
Sample Tag: MW-12-05 (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (Replicate 01) (continued)								
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/25/13 17:19	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58943.02
Sample Tag: MW-01(2) (11-11)
Collected Date/Time: 11/11/2013 10:30
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:26	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020A	11/22/13 16:12	PER	7440-38-2	
Barium	0.369	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/22/13 16:12	PER	7440-42-8	
Cadmium	0.0005	mg/L	0.0005	SW6020A	11/22/13 16:12	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7440-48-4	
Copper	0.017	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 16:12	PER	7439-92-1	
Manganese	0.073	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:20	CCM	7439-97-6	
Nickel	0.030	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7440-02-0	
Selenium	0.007	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:12	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 16:12	PER	7440-62-2	
Zinc	0.041	mg/L	0.005	SW6020A	11/22/13 16:12	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	91-58-7	

Lab Sample ID: S58943.02 (continued)
Sample Tag: MW-01(2) (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/25/13 18:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/25/13 18:46	PL	118-74-1	

Lab Sample ID: S58943.02 (continued)
Sample Tag: MW-01(2) (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 16:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 19:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 19:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	17	ug/L	1	SW8260C	11/20/13 19:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 19:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 19:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 19:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 19:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	120-82-1	

Lab Sample ID: S58943.02 (continued)
Sample Tag: MW-01(2) (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:23	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58943.03
Sample Tag: MW-02(2) (11-11)
Collected Date/Time: 11/11/2013 12:00
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:26	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020A	11/22/13 16:14	PER	7440-38-2	
Barium	0.129	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020A	11/22/13 16:14	PER	7440-42-8	
Cadmium	0.0011	mg/L	0.0005	SW6020A	11/22/13 16:14	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7440-48-4	
Copper	0.008	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 16:14	PER	7439-92-1	
Manganese	0.062	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:32	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:14	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 16:14	PER	7440-62-2	
Zinc	0.027	mg/L	0.005	SW6020A	11/22/13 16:14	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	91-58-7	

Lab Sample ID: S58943.03 (continued)
Sample Tag: MW-02(2) (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/25/13 19:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/25/13 19:20	PL	118-74-1	

Lab Sample ID: S58943.03 (continued)
Sample Tag: MW-02(2) (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 16:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 19:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 19:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 19:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 19:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 19:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 19:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	120-82-1	

Lab Sample ID: S58943.03 (continued)
Sample Tag: MW-02(2) (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:44	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58943.04
Sample Tag: MW-12-17 (11-11)
Collected Date/Time: 11/11/2013 15:00
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:26	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020A	11/22/13 16:24	PER	7440-38-2	
Barium	0.162	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/22/13 16:24	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:24	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 16:24	PER	7439-92-1	
Manganese	0.140	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:34	CCM	7439-97-6	
Nickel	0.006	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:24	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 16:24	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 16:24	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	91-58-7	

Lab Sample ID: S58943.04 (continued)
Sample Tag: MW-12-17 (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/25/13 19:54	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/25/13 19:54	PL	118-74-1	

Lab Sample ID: S58943.04 (continued)
Sample Tag: MW-12-17 (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 17:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 20:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 20:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 20:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 20:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 20:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 20:06	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	120-82-1	

Lab Sample ID: S58943.04 (continued)
Sample Tag: MW-12-17 (11-11)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:06	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58943.05
Sample Tag: Duplicate-5
Collected Date/Time: 11/11/2013 00:01
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:26	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020A	11/22/13 16:26	PER	7440-38-2	
Barium	0.165	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	11/22/13 16:26	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:26	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 16:26	PER	7439-92-1	
Manganese	0.142	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:36	CCM	7439-97-6	
Nickel	0.006	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:26	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 16:26	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 16:26	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	91-58-7	

Lab Sample ID: S58943.05 (continued)
Sample Tag: Duplicate-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/25/13 23:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/25/13 23:50	PL	118-74-1	

Lab Sample ID: S58943.05 (continued)
Sample Tag: Duplicate-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 17:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 20:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 20:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 20:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 20:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 20:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 20:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	120-82-1	

Lab Sample ID: S58943.05 (continued)
Sample Tag: Duplicate-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:28	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58943.06
Sample Tag: Equip Blank-5
Collected Date/Time: 11/11/2013 00:01
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:26	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/22/13 16:03	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	11/22/13 16:03	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:03	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 16:03	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:38	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:03	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 16:03	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 16:03	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	91-58-7	

Lab Sample ID: S58943.06 (continued)
Sample Tag: Equip Blank-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 00:24	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 00:24	PL	118-74-1	

Lab Sample ID: S58943.06 (continued)
Sample Tag: Equip Blank-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 17:36	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 20:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 20:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 20:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 20:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 20:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 20:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	120-82-1	

Lab Sample ID: S58943.06 (continued)
Sample Tag: Equip Blank-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:50	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58943.07
Sample Tag: Trip Blank
Collected Date/Time: 11/11/2013 07:00
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/21/13 15:40	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 17:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 21:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 21:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 21:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 21:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 21:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	79-34-5	

Lab Sample ID: S58943.07 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 21:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:12	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58943.08
Sample Tag: MW-12-05 (11-11) MS
Collected Date/Time: 11/11/2013 08:30
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	0.254	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7440-36-0	
Arsenic	0.238	mg/L	0.002	SW6020A	11/22/13 16:31	PER	7440-38-2	
Barium	0.295	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7440-39-3	
Boron	0.33	mg/L	0.04	SW6020A	11/22/13 16:31	PER	7440-42-8	
Cadmium	0.254	mg/L	0.0005	SW6020A	11/22/13 16:31	PER	7440-43-9	
Chromium	0.237	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7440-47-3	
Cobalt	0.247	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7440-48-4	
Copper	0.229	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7440-50-8	
Lead	0.236	mg/L	0.003	SW6020A	11/22/13 16:31	PER	7439-92-1	
Manganese	0.324	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7439-96-5	
Mercury	0.0021	mg/L	0.0001	SW7471B	11/15/13 15:52	CCM	7439-97-6	
Nickel	0.278	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7440-02-0	
Selenium	0.250	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7782-49-2	
Silver	0.232	mg/L	0.0005	SW6020A	11/22/13 16:31	PER	7440-22-4	
Vanadium	0.231	mg/L	0.004	SW6020A	11/22/13 16:31	PER	7440-62-2	
Zinc	0.260	mg/L	0.005	SW6020A	11/22/13 16:31	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	36	ug/L	1	SW8270D	11/26/13 00:57	PL	83-32-9	1
Acenaphthylene	39	ug/L	1	SW8270D	11/26/13 00:57	PL	208-96-8	1
Acetophenone	35	ug/L	1	SW8270D	11/26/13 00:57	PL	98-86-2	1
Anthracene	39	ug/L	1	SW8270D	11/26/13 00:57	PL	120-12-7	1
Atrazine	35	ug/L	1	SW8270D	11/26/13 00:57	PL	1912-24-9	1
1,1'-Biphenyl	35	ug/L	1	SW8270D	11/26/13 00:57	PL	92-52-4	1
4-Bromophenyl phenyl ether	36	ug/L	1	SW8270D	11/26/13 00:57	PL	101-55-3	1
di-n-Butyl phthalate	38	ug/L	1	SW8270D	11/26/13 00:57	PL	84-74-2	1
Benzaldehyde	29	ug/L	1	SW8270D	11/26/13 00:57	PL	100-52-7	1
Benzo(a)anthracene	40	ug/L	1	SW8270D	11/26/13 00:57	PL	56-55-3	1
Benzo(a)pyrene	41	ug/L	1	SW8270D	11/26/13 00:57	PL	50-32-8	1
Benzo(b)fluoranthene	35	ug/L	1	SW8270D	11/26/13 00:57	PL	205-99-2	1
Benzo(ghi)perylene	29	ug/L	1	SW8270D	11/26/13 00:57	PL	191-24-2	1
Benzo(k)fluoranthene	35	ug/L	1	SW8270D	11/26/13 00:57	PL	207-08-9	1
Butyl benzyl phthalate	39	ug/L	1	SW8270D	11/26/13 00:57	PL	85-68-7	1

1-Sample spiked at 0.051 mg/l

Lab Sample ID: S58943.08 (continued)
Sample Tag: MW-12-05 (11-11) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	35	ug/L	1	SW8270D	11/26/13 00:57	PL	91-58-7	1
2-Chlorophenol	34	ug/L	1	SW8270D	11/26/13 00:57	PL	95-57-8	1
4-Chloro-3-methylphenol	35	ug/L	1	SW8270D	11/26/13 00:57	PL	59-50-7	1
4-Chloroaniline	25	ug/L	1	SW8270D	11/26/13 00:57	PL	106-47-8	1
4-Chlorophenyl phenyl ether	37	ug/L	1	SW8270D	11/26/13 00:57	PL	7005-72-3	1
Caprolactam	5	ug/L	1	SW8270D	11/26/13 00:57	PL	105-60-2	1
Carbazole	36	ug/L	1	SW8270D	11/26/13 00:57	PL	86-74-8	1
bis(2-Chloroethoxy)methane	38	ug/L	1	SW8270D	11/26/13 00:57	PL	111-91-1	1
bis(2-Chloroethyl)ether	36	ug/L	1	SW8270D	11/26/13 00:57	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	45	ug/L	1	SW8270D	11/26/13 00:57	PL	108-60-1	1
Chrysene	41	ug/L	1	SW8270D	11/26/13 00:57	PL	218-01-9	1
2,4-Dichlorophenol	35	ug/L	1	SW8270D	11/26/13 00:57	PL	120-83-2	1
2,4-Dimethylphenol	39	ug/L	1	SW8270D	11/26/13 00:57	PL	105-67-9	1
2,4-Dinitrophenol	26	ug/L	1	SW8270D	11/26/13 00:57	PL	51-28-5	1
2,4-Dinitrotoluene	35	ug/L	1	SW8270D	11/26/13 00:57	PL	121-14-2	1
2,6-Dinitrotoluene	36	ug/L	1	SW8270D	11/26/13 00:57	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	31	ug/L	1	SW8270D	11/26/13 00:57	PL	534-52-1	1
Dibenzo(ah)anthracene	30	ug/L	2	SW8270D	11/26/13 00:57	PL	53-70-3	1
Dibenzofuran	37	ug/L	1	SW8270D	11/26/13 00:57	PL	132-64-9	1
Diethyl phthalate	39	ug/L	1	SW8270D	11/26/13 00:57	PL	84-66-2	1
Dimethyl phthalate	39	ug/L	1	SW8270D	11/26/13 00:57	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	39	ug/L	1	SW8270D	11/26/13 00:57	PL	117-81-7	1B
Fluoranthene	38	ug/L	1	SW8270D	11/26/13 00:57	PL	206-44-0	1
Fluorene	38	ug/L	1	SW8270D	11/26/13 00:57	PL	86-73-7	1
Hexachlorobutadiene	25	ug/L	1	SW8270D	11/26/13 00:57	PL	87-68-3	1
Hexachlorocyclopentadiene	24	ug/L	1	SW8270D	11/26/13 00:57	PL	77-47-4	1
Hexachloroethane	25	ug/L	1	SW8270D	11/26/13 00:57	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	30	ug/L	1	SW8270D	11/26/13 00:57	PL	193-39-5	1
Isophorone	41	ug/L	1	SW8270D	11/26/13 00:57	PL	78-59-1	1
2-Methylnaphthalene	32	ug/L	1	SW8270D	11/26/13 00:57	PL	91-57-6	1
2-Methylphenol	42	ug/L	1	SW8270D	11/26/13 00:57	PL	95-48-7	1
3-, 4-Methylphenol	63	ug/L	1	SW8270D	11/26/13 00:57	PL	3/4-Cresol	1
2-Nitroaniline	35	ug/L	1	SW8270D	11/26/13 00:57	PL	88-74-4	1
2-Nitrophenol	33	ug/L	1	SW8270D	11/26/13 00:57	PL	88-75-5	1
3-Nitroaniline	28	ug/L	1	SW8270D	11/26/13 00:57	PL	99-09-2	1
4-Nitroaniline	35	ug/L	1	SW8270D	11/26/13 00:57	PL	100-01-6	1
4-Nitrophenol	31	ug/L	1	SW8270D	11/26/13 00:57	PL	100-02-7	1
N-Nitrosodi-n-propylamine	37	ug/L	1	SW8270D	11/26/13 00:57	PL	621-64-7	1
N-Nitrosodiphenylamine	39	ug/L	1	SW8270D	11/26/13 00:57	PL	86-30-6	1
Naphthalene	32	ug/L	1	SW8270D	11/26/13 00:57	PL	91-20-3	1
Nitrobenzene	48	ug/L	1	SW8270D	11/26/13 00:57	PL	98-95-3	1
di-n-Octyl phthalate	39	ug/L	1	SW8270D	11/26/13 00:57	PL	117-84-0	1
Pentachlorophenol	30	ug/L	1	SW8270D	11/26/13 00:57	PL	87-86-5	1
Phenanthrene	39	ug/L	1	SW8270D	11/26/13 00:57	PL	85-01-8	1
Phenol	24	ug/L	1	SW8270D	11/26/13 00:57	PL	108-95-2	1B
Pyrene	41	ug/L	1	SW8270D	11/26/13 00:57	PL	129-00-0	1
2,4,5-Trichlorophenol	34	ug/L	1	SW8270D	11/26/13 00:57	PL	95-95-4	1

1-Sample spiked at 0.051 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S58943.08 (continued)
Sample Tag: MW-12-05 (11-11) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	33	ug/L	1	SW8270D	11/26/13 00:57	PL	88-06-2	1
Hexachlorobenzene	36	ug/L	1	SW8270D	11/26/13 00:57	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	58	ug/L	5	SW8260B - SIM	11/20/13 20:56	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	48	ug/L	1	SW8260C	11/22/13 22:16	WAT	76-13-1	2
Acetone	50	ug/L	10	SW8260C	11/22/13 22:16	WAT	67-64-1	2
Carbon disulfide	38	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-15-0	2
Methyl Acetate	45	ug/L	10	SW8260C	11/22/13 22:16	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	51	ug/L	1	SW8260C	11/22/13 22:16	WAT	1634-04-4	2
2-Butanone (MEK)	49	ug/L	10	SW8260C	11/22/13 22:16	WAT	78-93-3	2
Dichlorodifluoromethane	69	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-71-8	2
Chloromethane	51	ug/L	1	SW8260C	11/22/13 22:16	WAT	74-87-3	2
Vinyl chloride	50	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-01-4	2
Bromomethane	52	ug/L	1	SW8260C	11/22/13 22:16	WAT	74-83-9	2
Chloroethane	54	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-00-3	2
Trichlorofluoromethane	58	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-69-4	2
1,1-Dichloroethene	45	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-35-4	2
Methylene chloride	47	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-09-2	2
trans-1,2-Dichloroethene	47	ug/L	1	SW8260C	11/22/13 22:16	WAT	156-60-5	2
1,1-Dichloroethane	49	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-34-3	2
cis-1,2-Dichloroethene	52	ug/L	1	SW8260C	11/22/13 22:16	WAT	156-59-2	2
Chloroform	52	ug/L	1	SW8260C	11/22/13 22:16	WAT	67-66-3	2
1,1,1-Trichloroethane	55	ug/L	1	SW8260C	11/22/13 22:16	WAT	71-55-6	2
Cyclohexane	43	ug/L	1	SW8260C	11/22/13 22:16	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	55	ug/L	10	SW8260C	11/22/13 22:16	WAT	108-10-1	2
2-Hexanone	53	ug/L	10	SW8260C	11/22/13 22:16	WAT	591-78-6	2
Carbon tetrachloride	58	ug/L	1	SW8260C	11/22/13 22:16	WAT	56-23-5	2
Benzene	51	ug/L	1	SW8260C	11/22/13 22:16	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260C	11/22/13 22:16	WAT	107-06-2	2
Trichloroethene	53	ug/L	1	SW8260C	11/22/13 22:16	WAT	79-01-6	2
1,2-Dichloropropane	49	ug/L	1	SW8260C	11/22/13 22:16	WAT	78-87-5	2
Bromodichloromethane	55	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-27-4	2
Methyl cyclohexane	48	ug/L	1	SW8260C	11/22/13 22:16	WAT	108-87-2	2
cis-1,3-Dichloropropene	53	ug/L	1	SW8260C	11/22/13 22:16	WAT	10061-01-5	2
Toluene	45	ug/L	1	SW8260C	11/22/13 22:16	WAT	108-88-3	2
trans-1,3-Dichloropropene	54	ug/L	1	SW8260C	11/22/13 22:16	WAT	10061-02-6	2
1,1,2-Trichloroethane	53	ug/L	1	SW8260C	11/22/13 22:16	WAT	79-00-5	2
Tetrachloroethene	54	ug/L	1	SW8260C	11/22/13 22:16	WAT	127-18-4	2
Dibromochloromethane	58	ug/L	1	SW8260C	11/22/13 22:16	WAT	124-48-1	2
Chlorobenzene	55	ug/L	1	SW8260C	11/22/13 22:16	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	57	ug/L	1	SW8260C	11/22/13 22:16	WAT	79-34-5	2
Ethylbenzene	49	ug/L	1	SW8260C	11/22/13 22:16	WAT	100-41-4	2
p,m-Xylene	71	ug/L	2	SW8260C	11/22/13 22:16	WAT		2
o-Xylene	38	ug/L	1	SW8260C	11/22/13 22:16	WAT	95-47-6	2

1-Sample spiked at 0.051 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S58943.08 (continued)
Sample Tag: MW-12-05 (11-11) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	9	ug/L	1	SW8260C	11/22/13 22:16	WAT	100-42-5	1
Isopropylbenzene	52	ug/L	1	SW8260C	11/22/13 22:16	WAT	98-82-8	1
Bromoform	59	ug/L	1	SW8260C	11/22/13 22:16	WAT	75-25-2	1
1,3-Dichlorobenzene	52	ug/L	1	SW8260C	11/22/13 22:16	WAT	541-73-1	1
1,4-Dichlorobenzene	52	ug/L	1	SW8260C	11/22/13 22:16	WAT	106-46-7	1
1,2-Dichlorobenzene	53	ug/L	1	SW8260C	11/22/13 22:16	WAT	95-50-1	1
1,2,4-Trichlorobenzene	56	ug/L	1	SW8260C	11/22/13 22:16	WAT	120-82-1	1
1,2-Dibromoethane	60	ug/L	1	SW8260C	11/22/13 22:16	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	63	ug/L	1	SW8260C	11/22/13 22:16	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S58943.09
Sample Tag: MW-12-05 (11-11) MSD
Collected Date/Time: 11/11/2013 08:30
Matrix: Groundwater
COC Reference: 79788

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	0.258	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7440-36-0	
Arsenic	0.243	mg/L	0.002	SW6020A	11/22/13 16:33	PER	7440-38-2	
Barium	0.299	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7440-39-3	
Boron	0.36	mg/L	0.04	SW6020A	11/22/13 16:33	PER	7440-42-8	
Cadmium	0.254	mg/L	0.0005	SW6020A	11/22/13 16:33	PER	7440-43-9	
Chromium	0.244	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7440-47-3	
Cobalt	0.249	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7440-48-4	
Copper	0.232	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7440-50-8	
Lead	0.243	mg/L	0.003	SW6020A	11/22/13 16:33	PER	7439-92-1	
Manganese	0.321	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7439-96-5	
Mercury	0.0021	mg/L	0.0001	SW7471B	11/15/13 15:55	CCM	7439-97-6	
Nickel	0.284	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7440-02-0	
Selenium	0.272	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7782-49-2	
Silver	0.239	mg/L	0.0005	SW6020A	11/22/13 16:33	PER	7440-22-4	
Vanadium	0.235	mg/L	0.004	SW6020A	11/22/13 16:33	PER	7440-62-2	
Zinc	0.252	mg/L	0.005	SW6020A	11/22/13 16:33	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	33	ug/L	1	SW8270D	11/26/13 01:31	PL	83-32-9	1
Acenaphthylene	37	ug/L	1	SW8270D	11/26/13 01:31	PL	208-96-8	1
Acetophenone	32	ug/L	1	SW8270D	11/26/13 01:31	PL	98-86-2	1
Anthracene	35	ug/L	1	SW8270D	11/26/13 01:31	PL	120-12-7	1
Atrazine	31	ug/L	1	SW8270D	11/26/13 01:31	PL	1912-24-9	1
1,1'-Biphenyl	33	ug/L	1	SW8270D	11/26/13 01:31	PL	92-52-4	1
4-Bromophenyl phenyl ether	33	ug/L	1	SW8270D	11/26/13 01:31	PL	101-55-3	1
di-n-Butyl phthalate	34	ug/L	1	SW8270D	11/26/13 01:31	PL	84-74-2	1
Benzaldehyde	27	ug/L	1	SW8270D	11/26/13 01:31	PL	100-52-7	1
Benzo(a)anthracene	36	ug/L	1	SW8270D	11/26/13 01:31	PL	56-55-3	1
Benzo(a)pyrene	36	ug/L	1	SW8270D	11/26/13 01:31	PL	50-32-8	1
Benzo(b)fluoranthene	31	ug/L	1	SW8270D	11/26/13 01:31	PL	205-99-2	1
Benzo(ghi)perylene	24	ug/L	1	SW8270D	11/26/13 01:31	PL	191-24-2	1
Benzo(k)fluoranthene	31	ug/L	1	SW8270D	11/26/13 01:31	PL	207-08-9	1
Butyl benzyl phthalate	35	ug/L	1	SW8270D	11/26/13 01:31	PL	85-68-7	1

1-Sample spiked at 0.051 mg/l

Lab Sample ID: S58943.09 (continued)
Sample Tag: MW-12-05 (11-11) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	33	ug/L	1	SW8270D	11/26/13 01:31	PL	91-58-7	1
2-Chlorophenol	30	ug/L	1	SW8270D	11/26/13 01:31	PL	95-57-8	1
4-Chloro-3-methylphenol	32	ug/L	1	SW8270D	11/26/13 01:31	PL	59-50-7	1
4-Chloroaniline	26	ug/L	1	SW8270D	11/26/13 01:31	PL	106-47-8	1
4-Chlorophenyl phenyl ether	35	ug/L	1	SW8270D	11/26/13 01:31	PL	7005-72-3	1
Caprolactam	4	ug/L	1	SW8270D	11/26/13 01:31	PL	105-60-2	1
Carbazole	32	ug/L	1	SW8270D	11/26/13 01:31	PL	86-74-8	1
bis(2-Chloroethoxy)methane	34	ug/L	1	SW8270D	11/26/13 01:31	PL	111-91-1	1
bis(2-Chloroethyl)ether	33	ug/L	1	SW8270D	11/26/13 01:31	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	42	ug/L	1	SW8270D	11/26/13 01:31	PL	108-60-1	1
Chrysene	37	ug/L	1	SW8270D	11/26/13 01:31	PL	218-01-9	1
2,4-Dichlorophenol	32	ug/L	1	SW8270D	11/26/13 01:31	PL	120-83-2	1
2,4-Dimethylphenol	35	ug/L	1	SW8270D	11/26/13 01:31	PL	105-67-9	1
2,4-Dinitrophenol	23	ug/L	1	SW8270D	11/26/13 01:31	PL	51-28-5	1
2,4-Dinitrotoluene	32	ug/L	1	SW8270D	11/26/13 01:31	PL	121-14-2	1
2,6-Dinitrotoluene	32	ug/L	1	SW8270D	11/26/13 01:31	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	27	ug/L	1	SW8270D	11/26/13 01:31	PL	534-52-1	1
Dibenzo(ah)anthracene	25	ug/L	2	SW8270D	11/26/13 01:31	PL	53-70-3	1
Dibenzofuran	34	ug/L	1	SW8270D	11/26/13 01:31	PL	132-64-9	1
Diethyl phthalate	35	ug/L	1	SW8270D	11/26/13 01:31	PL	84-66-2	1
Dimethyl phthalate	36	ug/L	1	SW8270D	11/26/13 01:31	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	34	ug/L	1	SW8270D	11/26/13 01:31	PL	117-81-7	B1
Fluoranthene	34	ug/L	1	SW8270D	11/26/13 01:31	PL	206-44-0	1
Fluorene	34	ug/L	1	SW8270D	11/26/13 01:31	PL	86-73-7	1
Hexachlorobutadiene	27	ug/L	1	SW8270D	11/26/13 01:31	PL	87-68-3	1
Hexachlorocyclopentadiene	24	ug/L	1	SW8270D	11/26/13 01:31	PL	77-47-4	1
Hexachloroethane	28	ug/L	1	SW8270D	11/26/13 01:31	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	25	ug/L	1	SW8270D	11/26/13 01:31	PL	193-39-5	1
Isophorone	38	ug/L	1	SW8270D	11/26/13 01:31	PL	78-59-1	1
2-Methylnaphthalene	30	ug/L	1	SW8270D	11/26/13 01:31	PL	91-57-6	1
2-Methylphenol	36	ug/L	1	SW8270D	11/26/13 01:31	PL	95-48-7	1
3-, 4-Methylphenol	53	ug/L	1	SW8270D	11/26/13 01:31	PL	3/4-Cresol	1
2-Nitroaniline	31	ug/L	1	SW8270D	11/26/13 01:31	PL	88-74-4	1
2-Nitrophenol	30	ug/L	1	SW8270D	11/26/13 01:31	PL	88-75-5	1
3-Nitroaniline	26	ug/L	1	SW8270D	11/26/13 01:31	PL	99-09-2	1
4-Nitroaniline	32	ug/L	1	SW8270D	11/26/13 01:31	PL	100-01-6	1
4-Nitrophenol	24	ug/L	1	SW8270D	11/26/13 01:31	PL	100-02-7	1
N-Nitrosodi-n-propylamine	34	ug/L	1	SW8270D	11/26/13 01:31	PL	621-64-7	1
N-Nitrosodiphenylamine	35	ug/L	1	SW8270D	11/26/13 01:31	PL	86-30-6	1
Naphthalene	31	ug/L	1	SW8270D	11/26/13 01:31	PL	91-20-3	1
Nitrobenzene	46	ug/L	1	SW8270D	11/26/13 01:31	PL	98-95-3	1
di-n-Octyl phthalate	34	ug/L	1	SW8270D	11/26/13 01:31	PL	117-84-0	1
Pentachlorophenol	25	ug/L	1	SW8270D	11/26/13 01:31	PL	87-86-5	1
Phenanthrene	35	ug/L	1	SW8270D	11/26/13 01:31	PL	85-01-8	1
Phenol	18	ug/L	1	SW8270D	11/26/13 01:31	PL	108-95-2	1B
Pyrene	37	ug/L	1	SW8270D	11/26/13 01:31	PL	129-00-0	1
2,4,5-Trichlorophenol	31	ug/L	1	SW8270D	11/26/13 01:31	PL	95-95-4	1

1-Sample spiked at 0.051 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S58943.09 (continued)
Sample Tag: MW-12-05 (11-11) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	30	ug/L	1	SW8270D	11/26/13 01:31	PL	88-06-2	1
Hexachlorobenzene	32	ug/L	1	SW8270D	11/26/13 01:31	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	48	ug/L	5	SW8260B - SIM	11/20/13 21:15	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	49	ug/L	1	SW8260C	11/22/13 22:36	WAT	76-13-1	2
Acetone	49	ug/L	10	SW8260C	11/22/13 22:36	WAT	67-64-1	2
Carbon disulfide	40	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-15-0	2
Methyl Acetate	47	ug/L	10	SW8260C	11/22/13 22:36	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	51	ug/L	1	SW8260C	11/22/13 22:36	WAT	1634-04-4	2
2-Butanone (MEK)	46	ug/L	10	SW8260C	11/22/13 22:36	WAT	78-93-3	2
Dichlorodifluoromethane	71	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-71-8	2
Chloromethane	53	ug/L	1	SW8260C	11/22/13 22:36	WAT	74-87-3	2
Vinyl chloride	53	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-01-4	2
Bromomethane	55	ug/L	1	SW8260C	11/22/13 22:36	WAT	74-83-9	2
Chloroethane	56	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-00-3	2
Trichlorofluoromethane	32	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-69-4	2
1,1-Dichloroethene	45	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-35-4	2
Methylene chloride	49	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-09-2	2
trans-1,2-Dichloroethene	47	ug/L	1	SW8260C	11/22/13 22:36	WAT	156-60-5	2
1,1-Dichloroethane	51	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-34-3	2
cis-1,2-Dichloroethene	53	ug/L	1	SW8260C	11/22/13 22:36	WAT	156-59-2	2
Chloroform	52	ug/L	1	SW8260C	11/22/13 22:36	WAT	67-66-3	2
1,1,1-Trichloroethane	55	ug/L	1	SW8260C	11/22/13 22:36	WAT	71-55-6	2
Cyclohexane	44	ug/L	1	SW8260C	11/22/13 22:36	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	55	ug/L	10	SW8260C	11/22/13 22:36	WAT	108-10-1	2
2-Hexanone	53	ug/L	10	SW8260C	11/22/13 22:36	WAT	591-78-6	2
Carbon tetrachloride	58	ug/L	1	SW8260C	11/22/13 22:36	WAT	56-23-5	2
Benzene	52	ug/L	1	SW8260C	11/22/13 22:36	WAT	71-43-2	2
1,2-Dichloroethane	54	ug/L	1	SW8260C	11/22/13 22:36	WAT	107-06-2	2
Trichloroethene	53	ug/L	1	SW8260C	11/22/13 22:36	WAT	79-01-6	2
1,2-Dichloropropane	50	ug/L	1	SW8260C	11/22/13 22:36	WAT	78-87-5	2
Bromodichloromethane	55	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-27-4	2
Methyl cyclohexane	49	ug/L	1	SW8260C	11/22/13 22:36	WAT	108-87-2	2
cis-1,3-Dichloropropene	54	ug/L	1	SW8260C	11/22/13 22:36	WAT	10061-01-5	2
Toluene	46	ug/L	1	SW8260C	11/22/13 22:36	WAT	108-88-3	2
trans-1,3-Dichloropropene	53	ug/L	1	SW8260C	11/22/13 22:36	WAT	10061-02-6	2
1,1,2-Trichloroethane	54	ug/L	1	SW8260C	11/22/13 22:36	WAT	79-00-5	2
Tetrachloroethene	54	ug/L	1	SW8260C	11/22/13 22:36	WAT	127-18-4	2
Dibromochloromethane	58	ug/L	1	SW8260C	11/22/13 22:36	WAT	124-48-1	2
Chlorobenzene	56	ug/L	1	SW8260C	11/22/13 22:36	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	55	ug/L	1	SW8260C	11/22/13 22:36	WAT	79-34-5	2
Ethylbenzene	50	ug/L	1	SW8260C	11/22/13 22:36	WAT	100-41-4	2
p,m-Xylene	76	ug/L	2	SW8260C	11/22/13 22:36	WAT		2
o-Xylene	40	ug/L	1	SW8260C	11/22/13 22:36	WAT	95-47-6	2

1-Sample spiked at 0.051 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S58943.09 (continued)
Sample Tag: MW-12-05 (11-11) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	10	ug/L	1	SW8260C	11/22/13 22:36	WAT	100-42-5	1
Isopropylbenzene	53	ug/L	1	SW8260C	11/22/13 22:36	WAT	98-82-8	1
Bromoform	57	ug/L	1	SW8260C	11/22/13 22:36	WAT	75-25-2	1
1,3-Dichlorobenzene	54	ug/L	1	SW8260C	11/22/13 22:36	WAT	541-73-1	1
1,4-Dichlorobenzene	53	ug/L	1	SW8260C	11/22/13 22:36	WAT	106-46-7	1
1,2-Dichlorobenzene	55	ug/L	1	SW8260C	11/22/13 22:36	WAT	95-50-1	1
1,2,4-Trichlorobenzene	61	ug/L	1	SW8260C	11/22/13 22:36	WAT	120-82-1	1
1,2-Dibromoethane	59	ug/L	1	SW8260C	11/22/13 22:36	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	64	ug/L	1	SW8260C	11/22/13 22:36	WAT	96-12-8	1

1-Spiked at 50ug/l

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

79788

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 E-MAIL ADDRESS: randy.christensen@arcadis-us.com
P.O. NO.: Lansing Plant 2 Project#: B00644 .2013
QUOTE NO.:

INVOICE TO

CONTACT NAME: ARCADIS ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME:
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wares

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 01 1-4-241	TAL Metal	SVOCs
58943.01	11-11	8:30	MW-12.05 (11-11)	GW	6	2	3	1					+	+	+
.02	11-11	10:30	MW-01(2) (11-11)	GW	6	2	3	1					+	+	+
.03	11-11	12:00	MW-02(2) (11-11)	GW	6	2	3	1					+	+	+
.04	11-11	15:00	MW-12.17 (11-11)	GW	6	2	3	1					+	+	+
.05	11-11		Duplicate-5	GW	6	2	3	1					+	+	+
.06	11-11		Equip Blank-5	GW	6	2	3	1					+	+	+
.07	11-11	7:00	Trip Blank	GW	1		1						+		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
☐ Sampler	11-11	17:00
RECEIVED BY: SIGNATURE/ORGANIZATION: ME Storage	11-11	17:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION: ME Storage	11-12	
RECEIVED BY: SIGNATURE/ORGANIZATION	11-12-13	945

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	11-12-13	
RECEIVED BY: SIGNATURE/ORGANIZATION: Kevin George	11/12/13	945

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58942.01(01)
Generated on 11/26/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58942.01-S58942.04
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/11/2013
Submitted Date/Time: 11/12/2013 09:45
Sampled by: Robert Prigge
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58942.01	MW-13-25	Groundwater	11/11/2013 09:15
S58942.02	MW-13-29	Groundwater	11/11/2013 12:02
S58942.03	MW-13-27	Groundwater	11/11/2013 14:25
S58942.04	Trip Blank	Liquid	11/11/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58942.01
Sample Tag: MW-13-25
Collected Date/Time: 11/11/2013 09:15
Matrix: Groundwater
COC Reference: 77095

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/20/13 10:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7440-36-0	
Arsenic, Dissolved	0.023	mg/L	0.002	SW6020A	11/22/13 16:07	PER	7440-38-2	
Arsenic	0.023	mg/L	0.002	SW6020A	11/22/13 16:05	PER	7440-38-2	
Barium	0.020	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020A	11/22/13 16:05	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:05	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7440-47-3	
Cobalt	0.005	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/22/13 16:07	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 16:05	PER	7439-92-1	
Manganese	0.824	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:14	CCM	7439-97-6	
Nickel	0.060	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7440-02-0	
Selenium	0.007	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:05	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/22/13 16:07	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 16:05	PER	7440-62-2	
Zinc	0.015	mg/L	0.005	SW6020A	11/22/13 16:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	205-99-2	

Lab Sample ID: S58942.01 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/25/13 16:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/25/13 16:30	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	129-00-0	

Lab Sample ID: S58942.01 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/25/13 16:30	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	13	ug/L	5	SW8260B - SIM	11/20/13 17:19	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/19/13 19:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/19/13 19:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/19/13 19:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/19/13 19:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/19/13 19:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/19/13 19:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	100-42-5	

Lab Sample ID: S58942.01 (continued)
Sample Tag: MW-13-25

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/19/13 19:14	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58942.02
Sample Tag: MW-13-29
Collected Date/Time: 11/11/2013 12:02
Matrix: Groundwater
COC Reference: 77095

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/20/13 10:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020A	11/22/13 15:34	PER	7440-38-2	
Barium	0.018	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7440-39-3	
Boron	0.54	mg/L	0.04	SW6020A	11/22/13 15:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7440-47-3	
Cobalt	0.014	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 15:34	PER	7439-92-1	
Manganese	0.778	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:16	CCM	7439-97-6	
Nickel	0.054	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:34	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 15:34	PER	7440-62-2	
Zinc	0.012	mg/L	0.005	SW6020A	11/22/13 15:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	91-58-7	

Lab Sample ID: S58942.02 (continued)
Sample Tag: MW-13-29

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/25/13 17:04	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/25/13 17:04	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/25/13 17:04	PL	118-74-1	

Lab Sample ID: S58942.02 (continued)
Sample Tag: MW-13-29

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	31	ug/L	5	SW8260B - SIM	11/20/13 17:37	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/19/13 19:36	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/19/13 19:36	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/19/13 19:36	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/19/13 19:36	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/19/13 19:36	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/19/13 19:36	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	120-82-1	

Lab Sample ID: S58942.02 (continued)
Sample Tag: MW-13-29

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/19/13 19:36	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58942.03
Sample Tag: MW-13-27
Collected Date/Time: 11/11/2013 14:25
Matrix: Groundwater
COC Reference: 77095

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/20/13 10:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020A	11/22/13 16:10	PER	7440-38-2	
Barium	0.034	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020A	11/22/13 16:10	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:10	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 16:10	PER	7439-92-1	
Manganese	0.680	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:18	CCM	7439-97-6	
Nickel	0.028	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 16:10	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 16:10	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	11/22/13 16:10	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	91-58-7	

Lab Sample ID: S58942.03 (continued)
Sample Tag: MW-13-27

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/25/13 17:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/25/13 17:38	PL	118-74-1	

Lab Sample ID: S58942.03 (continued)
Sample Tag: MW-13-27

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 17:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/19/13 19:58	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/19/13 19:58	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/19/13 19:58	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/19/13 19:58	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/19/13 19:58	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/19/13 19:58	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	120-82-1	

Lab Sample ID: S58942.03 (continued)
Sample Tag: MW-13-27

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/19/13 19:58	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58942.04
Sample Tag: Trip Blank
Collected Date/Time: 11/11/2013 00:01
Matrix: Liquid
COC Reference: 77095

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/20/13 10:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 18:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/19/13 20:20	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/19/13 20:20	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/19/13 20:20	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/19/13 20:20	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/19/13 20:20	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	79-34-5	

Lab Sample ID: S58942.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/19/13 20:20	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/19/13 20:20	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77095

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.0.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Robert Briggs

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals	Diss. Mn, Fe, and Manganese							
58942.01	11/4/2013	09:15	MW-13-25	GW	7	X	X	X					3	2	1	1							
.02	11/4/2013	12:02	MW-13-29	GW	6	X	X	X					3	2	1								
.03	11/4/2013	14:25	MW-13-27	GW	6	X	X	X					3	2	1								
.04	--	--	Trip Blank	L	1		X						1										

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS ☐ Sampler	DATE 11/11/2013	TIME 16:20
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/11/2013	TIME 1635
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-12-13	TIME 845
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-13-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Liam George	DATE 11/14/13	TIME 945

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58941.01(01)
Generated on 11/25/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58941.01-S58941.08
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/11/2013
Submitted Date/Time: 11/12/2013 09:45
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58941.01	MW-12-14 (111113)	Groundwater	11/11/2013 09:15
S58941.02	MW-12-14 (111113) MS	Groundwater	11/11/2013 09:15
S58941.03	MW-12-14 (111113) MSD	Groundwater	11/11/2013 09:15
S58941.04	P6-MW-01 (111113)	Groundwater	11/11/2013 10:50
S58941.05	P6-SB-18 (111113)	Groundwater	11/11/2013 12:40
S58941.06	Dup #4	Groundwater	11/11/2013 00:01
S58941.07	P6-SB-37 (111113)	Groundwater	11/11/2013 15:35
S58941.08	Trip Blank	Liquid	11/11/2013 07:10

Analytical Laboratory Report

Lab Sample ID: S58941.01
Sample Tag: MW-12-14 (111113)
Collected Date/Time: 11/11/2013 09:15
Matrix: Groundwater
COC Reference: 77098

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:27	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	11/22/13 15:45	PER	7440-38-2	
Barium	0.099	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	11/22/13 15:45	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:45	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 15:45	PER	7439-92-1	
Manganese	0.313	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:22	CCM	7439-97-6	
Nickel	0.014	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:45	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 15:45	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 15:45	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	91-58-7	

Lab Sample ID: S58941.01 (continued)
Sample Tag: MW-12-14 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/21/13 22:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	98-95-3	
di-n-Octyl phthalate	1	ug/L	1	SW8270D	11/21/13 22:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/21/13 22:53	PL	118-74-1	

Lab Sample ID: S58941.01 (continued)
Sample Tag: MW-12-14 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 17:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/21/13 15:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/21/13 15:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/21/13 15:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/21/13 15:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/21/13 15:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/21/13 15:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	120-82-1	

Lab Sample ID: S58941.01 (continued)
Sample Tag: MW-12-14 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/21/13 15:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58941.02
Sample Tag: MW-12-14 (111113) MS
Collected Date/Time: 11/11/2013 09:15
Matrix: Groundwater
COC Reference: 77098

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:27	LBR		
Metals								
Antimony	0.255	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7440-36-0	
Arsenic	0.251	mg/L	0.002	SW6020A	11/22/13 15:52	PER	7440-38-2	
Barium	0.359	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7440-39-3	
Boron	0.33	mg/L	0.04	SW6020A	11/22/13 15:52	PER	7440-42-8	
Cadmium	0.256	mg/L	0.0005	SW6020A	11/22/13 15:52	PER	7440-43-9	
Chromium	0.245	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7440-47-3	
Cobalt	0.250	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7440-48-4	
Copper	0.244	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7440-50-8	
Lead	0.241	mg/L	0.003	SW6020A	11/22/13 15:52	PER	7439-92-1	
Manganese	0.556	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7439-96-5	
Mercury	0.0021	mg/L	0.0001	SW7471B	11/15/13 15:24	CCM	7439-97-6	
Nickel	0.265	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7440-02-0	
Selenium	0.255	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7782-49-2	
Silver	0.240	mg/L	0.0005	SW6020A	11/22/13 15:52	PER	7440-22-4	
Vanadium	0.243	mg/L	0.004	SW6020A	11/22/13 15:52	PER	7440-62-2	
Zinc	0.260	mg/L	0.005	SW6020A	11/22/13 15:52	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	31	ug/L	1	SW8270D	11/21/13 23:27	PL	83-32-9	1
Acenaphthylene	34	ug/L	1	SW8270D	11/21/13 23:27	PL	208-96-8	1
Acetophenone	30	ug/L	1	SW8270D	11/21/13 23:27	PL	98-86-2	1
Anthracene	32	ug/L	1	SW8270D	11/21/13 23:27	PL	120-12-7	1
Atrazine	28	ug/L	1	SW8270D	11/21/13 23:27	PL	1912-24-9	1
1,1'-Biphenyl	32	ug/L	1	SW8270D	11/21/13 23:27	PL	92-52-4	1
4-Bromophenyl phenyl ether	30	ug/L	1	SW8270D	11/21/13 23:27	PL	101-55-3	1
di-n-Butyl phthalate	32	ug/L	1	SW8270D	11/21/13 23:27	PL	84-74-2	1
Benzaldehyde	25	ug/L	1	SW8270D	11/21/13 23:27	PL	100-52-7	1
Benzo(a)anthracene	33	ug/L	1	SW8270D	11/21/13 23:27	PL	56-55-3	1
Benzo(a)pyrene	33	ug/L	1	SW8270D	11/21/13 23:27	PL	50-32-8	1
Benzo(b)fluoranthene	29	ug/L	1	SW8270D	11/21/13 23:27	PL	205-99-2	1
Benzo(ghi)perylene	29	ug/L	1	SW8270D	11/21/13 23:27	PL	191-24-2	1
Benzo(k)fluoranthene	28	ug/L	1	SW8270D	11/21/13 23:27	PL	207-08-9	1
Butyl benzyl phthalate	32	ug/L	1	SW8270D	11/21/13 23:27	PL	85-68-7	1

1-Sample spiked at 0.051 mg/l

Lab Sample ID: S58941.02 (continued)
Sample Tag: MW-12-14 (111113) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	31	ug/L	1	SW8270D	11/21/13 23:27	PL	91-58-7	1
2-Chlorophenol	29	ug/L	1	SW8270D	11/21/13 23:27	PL	95-57-8	1
4-Chloro-3-methylphenol	30	ug/L	1	SW8270D	11/21/13 23:27	PL	59-50-7	1
4-Chloroaniline	22	ug/L	1	SW8270D	11/21/13 23:27	PL	106-47-8	1
4-Chlorophenyl phenyl ether	32	ug/L	1	SW8270D	11/21/13 23:27	PL	7005-72-3	1
Caprolactam	5	ug/L	1	SW8270D	11/21/13 23:27	PL	105-60-2	1
Carbazole	29	ug/L	1	SW8270D	11/21/13 23:27	PL	86-74-8	1
bis(2-Chloroethoxy)methane	32	ug/L	1	SW8270D	11/21/13 23:27	PL	111-91-1	1
bis(2-Chloroethyl)ether	30	ug/L	1	SW8270D	11/21/13 23:27	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	37	ug/L	1	SW8270D	11/21/13 23:27	PL	108-60-1	1
Chrysene	34	ug/L	1	SW8270D	11/21/13 23:27	PL	218-01-9	1
2,4-Dichlorophenol	30	ug/L	1	SW8270D	11/21/13 23:27	PL	120-83-2	1
2,4-Dimethylphenol	33	ug/L	1	SW8270D	11/21/13 23:27	PL	105-67-9	1
2,4-Dinitrophenol	24	ug/L	1	SW8270D	11/21/13 23:27	PL	51-28-5	1
2,4-Dinitrotoluene	29	ug/L	1	SW8270D	11/21/13 23:27	PL	121-14-2	1
2,6-Dinitrotoluene	30	ug/L	1	SW8270D	11/21/13 23:27	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	26	ug/L	1	SW8270D	11/21/13 23:27	PL	534-52-1	1
Dibenzo(ah)anthracene	30	ug/L	2	SW8270D	11/21/13 23:27	PL	53-70-3	1
Dibenzofuran	32	ug/L	1	SW8270D	11/21/13 23:27	PL	132-64-9	1
Diethyl phthalate	32	ug/L	1	SW8270D	11/21/13 23:27	PL	84-66-2	1
Dimethyl phthalate	33	ug/L	1	SW8270D	11/21/13 23:27	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	33	ug/L	1	SW8270D	11/21/13 23:27	PL	117-81-7	1B
Fluoranthene	32	ug/L	1	SW8270D	11/21/13 23:27	PL	206-44-0	1
Fluorene	32	ug/L	1	SW8270D	11/21/13 23:27	PL	86-73-7	1
Hexachlorobutadiene	25	ug/L	1	SW8270D	11/21/13 23:27	PL	87-68-3	1
Hexachlorocyclopentadiene	22	ug/L	1	SW8270D	11/21/13 23:27	PL	77-47-4	1
Hexachloroethane	27	ug/L	1	SW8270D	11/21/13 23:27	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	29	ug/L	1	SW8270D	11/21/13 23:27	PL	193-39-5	1
Isophorone	35	ug/L	1	SW8270D	11/21/13 23:27	PL	78-59-1	1
2-Methylnaphthalene	28	ug/L	1	SW8270D	11/21/13 23:27	PL	91-57-6	1
2-Methylphenol	34	ug/L	1	SW8270D	11/21/13 23:27	PL	95-48-7	1
3-, 4-Methylphenol	53	ug/L	1	SW8270D	11/21/13 23:27	PL	3/4-Cresol	1
2-Nitroaniline	29	ug/L	1	SW8270D	11/21/13 23:27	PL	88-74-4	1
2-Nitrophenol	29	ug/L	1	SW8270D	11/21/13 23:27	PL	88-75-5	1
3-Nitroaniline	23	ug/L	1	SW8270D	11/21/13 23:27	PL	99-09-2	1
4-Nitroaniline	27	ug/L	1	SW8270D	11/21/13 23:27	PL	100-01-6	1
4-Nitrophenol	28	ug/L	1	SW8270D	11/21/13 23:27	PL	100-02-7	1
N-Nitrosodi-n-propylamine	31	ug/L	1	SW8270D	11/21/13 23:27	PL	621-64-7	1
N-Nitrosodiphenylamine	33	ug/L	1	SW8270D	11/21/13 23:27	PL	86-30-6	1
Naphthalene	30	ug/L	1	SW8270D	11/21/13 23:27	PL	91-20-3	1
Nitrobenzene	43	ug/L	1	SW8270D	11/21/13 23:27	PL	98-95-3	1
di-n-Octyl phthalate	32	ug/L	1	SW8270D	11/21/13 23:27	PL	117-84-0	1
Pentachlorophenol	25	ug/L	1	SW8270D	11/21/13 23:27	PL	87-86-5	1
Phenanthrene	33	ug/L	1	SW8270D	11/21/13 23:27	PL	85-01-8	1
Phenol	22	ug/L	1	SW8270D	11/21/13 23:27	PL	108-95-2	1
Pyrene	34	ug/L	1	SW8270D	11/21/13 23:27	PL	129-00-0	1
2,4,5-Trichlorophenol	30	ug/L	1	SW8270D	11/21/13 23:27	PL	95-95-4	1

1-Sample spiked at 0.051 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S58941.02 (continued)
Sample Tag: MW-12-14 (111113) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	29	ug/L	1	SW8270D	11/21/13 23:27	PL	88-06-2	1
Hexachlorobenzene	30	ug/L	1	SW8270D	11/21/13 23:27	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	48	ug/L	5	SW8260B - SIM	11/20/13 20:20	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	50	ug/L	1	SW8260C	11/21/13 13:31	WAT	76-13-1	2
Acetone	43	ug/L	10	SW8260C	11/21/13 13:31	WAT	67-64-1	2
Carbon disulfide	47	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-15-0	2
Methyl Acetate	47	ug/L	10	SW8260C	11/21/13 13:31	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	50	ug/L	1	SW8260C	11/21/13 13:31	WAT	1634-04-4	2
2-Butanone (MEK)	43	ug/L	10	SW8260C	11/21/13 13:31	WAT	78-93-3	2
Dichlorodifluoromethane	43	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-71-8	2
Chloromethane	43	ug/L	1	SW8260C	11/21/13 13:31	WAT	74-87-3	2
Vinyl chloride	46	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-01-4	2
Bromomethane	46	ug/L	1	SW8260C	11/21/13 13:31	WAT	74-83-9	2
Chloroethane	48	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-00-3	2
Trichlorofluoromethane	49	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-69-4	2
1,1-Dichloroethene	47	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-35-4	2
Methylene chloride	47	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-09-2	2
trans-1,2-Dichloroethene	47	ug/L	1	SW8260C	11/21/13 13:31	WAT	156-60-5	2
1,1-Dichloroethane	49	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-34-3	2
cis-1,2-Dichloroethene	52	ug/L	1	SW8260C	11/21/13 13:31	WAT	156-59-2	2
Chloroform	49	ug/L	1	SW8260C	11/21/13 13:31	WAT	67-66-3	2
1,1,1-Trichloroethane	51	ug/L	1	SW8260C	11/21/13 13:31	WAT	71-55-6	2
Cyclohexane	45	ug/L	1	SW8260C	11/21/13 13:31	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	52	ug/L	10	SW8260C	11/21/13 13:31	WAT	108-10-1	2
2-Hexanone	48	ug/L	10	SW8260C	11/21/13 13:31	WAT	591-78-6	2
Carbon tetrachloride	52	ug/L	1	SW8260C	11/21/13 13:31	WAT	56-23-5	2
Benzene	49	ug/L	1	SW8260C	11/21/13 13:31	WAT	71-43-2	2
1,2-Dichloroethane	47	ug/L	1	SW8260C	11/21/13 13:31	WAT	107-06-2	2
Trichloroethene	49	ug/L	1	SW8260C	11/21/13 13:31	WAT	79-01-6	2
1,2-Dichloropropane	49	ug/L	1	SW8260C	11/21/13 13:31	WAT	78-87-5	2
Bromodichloromethane	52	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-27-4	2
Methyl cyclohexane	51	ug/L	1	SW8260C	11/21/13 13:31	WAT	108-87-2	2
cis-1,3-Dichloropropene	53	ug/L	1	SW8260C	11/21/13 13:31	WAT	10061-01-5	2
Toluene	49	ug/L	1	SW8260C	11/21/13 13:31	WAT	108-88-3	2
trans-1,3-Dichloropropene	54	ug/L	1	SW8260C	11/21/13 13:31	WAT	10061-02-6	2
1,1,2-Trichloroethane	50	ug/L	1	SW8260C	11/21/13 13:31	WAT	79-00-5	2
Tetrachloroethene	49	ug/L	1	SW8260C	11/21/13 13:31	WAT	127-18-4	2
Dibromochloromethane	56	ug/L	1	SW8260C	11/21/13 13:31	WAT	124-48-1	2
Chlorobenzene	52	ug/L	1	SW8260C	11/21/13 13:31	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	50	ug/L	1	SW8260C	11/21/13 13:31	WAT	79-34-5	2
Ethylbenzene	53	ug/L	1	SW8260C	11/21/13 13:31	WAT	100-41-4	2
p,m-Xylene	106	ug/L	2	SW8260C	11/21/13 13:31	WAT		2
o-Xylene	51	ug/L	1	SW8260C	11/21/13 13:31	WAT	95-47-6	2

1-Sample spiked at 0.051 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S58941.02 (continued)
Sample Tag: MW-12-14 (111113) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	48	ug/L	1	SW8260C	11/21/13 13:31	WAT	100-42-5	1
Isopropylbenzene	53	ug/L	1	SW8260C	11/21/13 13:31	WAT	98-82-8	1
Bromoform	58	ug/L	1	SW8260C	11/21/13 13:31	WAT	75-25-2	1
1,3-Dichlorobenzene	51	ug/L	1	SW8260C	11/21/13 13:31	WAT	541-73-1	1
1,4-Dichlorobenzene	51	ug/L	1	SW8260C	11/21/13 13:31	WAT	106-46-7	1
1,2-Dichlorobenzene	51	ug/L	1	SW8260C	11/21/13 13:31	WAT	95-50-1	1
1,2,4-Trichlorobenzene	58	ug/L	1	SW8260C	11/21/13 13:31	WAT	120-82-1	1
1,2-Dibromoethane	53	ug/L	1	SW8260C	11/21/13 13:31	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	55	ug/L	1	SW8260C	11/21/13 13:31	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S58941.03
Sample Tag: MW-12-14 (111113) MSD
Collected Date/Time: 11/11/2013 09:15
Matrix: Groundwater
COC Reference: 77098

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:27	LBR		
Metals								
Antimony	0.261	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7440-36-0	
Arsenic	0.248	mg/L	0.002	SW6020A	11/22/13 15:54	PER	7440-38-2	
Barium	0.365	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7440-39-3	
Boron	0.33	mg/L	0.04	SW6020A	11/22/13 15:54	PER	7440-42-8	
Cadmium	0.258	mg/L	0.0005	SW6020A	11/22/13 15:54	PER	7440-43-9	
Chromium	0.243	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7440-47-3	
Cobalt	0.250	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7440-48-4	
Copper	0.237	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7440-50-8	
Lead	0.241	mg/L	0.003	SW6020A	11/22/13 15:54	PER	7439-92-1	
Manganese	0.556	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7439-96-5	
Mercury	0.0021	mg/L	0.0001	SW7471B	11/15/13 15:26	CCM	7439-97-6	
Nickel	0.261	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7440-02-0	
Selenium	0.252	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7782-49-2	
Silver	0.245	mg/L	0.0005	SW6020A	11/22/13 15:54	PER	7440-22-4	
Vanadium	0.248	mg/L	0.004	SW6020A	11/22/13 15:54	PER	7440-62-2	
Zinc	0.259	mg/L	0.005	SW6020A	11/22/13 15:54	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	37	ug/L	1	SW8270D	11/22/13 00:01	PL	83-32-9	1
Acenaphthylene	40	ug/L	1	SW8270D	11/22/13 00:01	PL	208-96-8	1
Acetophenone	33	ug/L	1	SW8270D	11/22/13 00:01	PL	98-86-2	1
Anthracene	39	ug/L	1	SW8270D	11/22/13 00:01	PL	120-12-7	1
Atrazine	35	ug/L	1	SW8270D	11/22/13 00:01	PL	1912-24-9	1
1,1'-Biphenyl	37	ug/L	1	SW8270D	11/22/13 00:01	PL	92-52-4	1
4-Bromophenyl phenyl ether	36	ug/L	1	SW8270D	11/22/13 00:01	PL	101-55-3	1
di-n-Butyl phthalate	38	ug/L	1	SW8270D	11/22/13 00:01	PL	84-74-2	1
Benzaldehyde	27	ug/L	1	SW8270D	11/22/13 00:01	PL	100-52-7	1
Benzo(a)anthracene	40	ug/L	1	SW8270D	11/22/13 00:01	PL	56-55-3	1
Benzo(a)pyrene	40	ug/L	1	SW8270D	11/22/13 00:01	PL	50-32-8	1
Benzo(b)fluoranthene	34	ug/L	1	SW8270D	11/22/13 00:01	PL	205-99-2	1
Benzo(ghi)perylene	34	ug/L	1	SW8270D	11/22/13 00:01	PL	191-24-2	1
Benzo(k)fluoranthene	35	ug/L	1	SW8270D	11/22/13 00:01	PL	207-08-9	1
Butyl benzyl phthalate	39	ug/L	1	SW8270D	11/22/13 00:01	PL	85-68-7	1

1-Sample spiked at 0.051 mg/l

Lab Sample ID: S58941.03 (continued)
Sample Tag: MW-12-14 (111113) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	36	ug/L	1	SW8270D	11/22/13 00:01	PL	91-58-7	1
2-Chlorophenol	33	ug/L	1	SW8270D	11/22/13 00:01	PL	95-57-8	1
4-Chloro-3-methylphenol	36	ug/L	1	SW8270D	11/22/13 00:01	PL	59-50-7	1
4-Chloroaniline	29	ug/L	1	SW8270D	11/22/13 00:01	PL	106-47-8	1
4-Chlorophenyl phenyl ether	38	ug/L	1	SW8270D	11/22/13 00:01	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270D	11/22/13 00:01	PL	105-60-2	1
Carbazole	36	ug/L	1	SW8270D	11/22/13 00:01	PL	86-74-8	1
bis(2-Chloroethoxy)methane	36	ug/L	1	SW8270D	11/22/13 00:01	PL	111-91-1	1
bis(2-Chloroethyl)ether	33	ug/L	1	SW8270D	11/22/13 00:01	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	40	ug/L	1	SW8270D	11/22/13 00:01	PL	108-60-1	1
Chrysene	42	ug/L	1	SW8270D	11/22/13 00:01	PL	218-01-9	1
2,4-Dichlorophenol	35	ug/L	1	SW8270D	11/22/13 00:01	PL	120-83-2	1
2,4-Dimethylphenol	38	ug/L	1	SW8270D	11/22/13 00:01	PL	105-67-9	1
2,4-Dinitrophenol	29	ug/L	1	SW8270D	11/22/13 00:01	PL	51-28-5	1
2,4-Dinitrotoluene	35	ug/L	1	SW8270D	11/22/13 00:01	PL	121-14-2	1
2,6-Dinitrotoluene	36	ug/L	1	SW8270D	11/22/13 00:01	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	32	ug/L	1	SW8270D	11/22/13 00:01	PL	534-52-1	1
Dibenzo(ah)anthracene	35	ug/L	2	SW8270D	11/22/13 00:01	PL	53-70-3	1
Dibenzofuran	38	ug/L	1	SW8270D	11/22/13 00:01	PL	132-64-9	1
Diethyl phthalate	39	ug/L	1	SW8270D	11/22/13 00:01	PL	84-66-2	1
Dimethyl phthalate	39	ug/L	1	SW8270D	11/22/13 00:01	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	40	ug/L	1	SW8270D	11/22/13 00:01	PL	117-81-7	1B
Fluoranthene	38	ug/L	1	SW8270D	11/22/13 00:01	PL	206-44-0	1
Fluorene	38	ug/L	1	SW8270D	11/22/13 00:01	PL	86-73-7	1
Hexachlorobutadiene	28	ug/L	1	SW8270D	11/22/13 00:01	PL	87-68-3	1
Hexachlorocyclopentadiene	25	ug/L	1	SW8270D	11/22/13 00:01	PL	77-47-4	1
Hexachloroethane	28	ug/L	1	SW8270D	11/22/13 00:01	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	34	ug/L	1	SW8270D	11/22/13 00:01	PL	193-39-5	1
Isophorone	41	ug/L	1	SW8270D	11/22/13 00:01	PL	78-59-1	1
2-Methylnaphthalene	32	ug/L	1	SW8270D	11/22/13 00:01	PL	91-57-6	1
2-Methylphenol	38	ug/L	1	SW8270D	11/22/13 00:01	PL	95-48-7	1
3-, 4-Methylphenol	60	ug/L	1	SW8270D	11/22/13 00:01	PL	3/4-Cresol	1
2-Nitroaniline	35	ug/L	1	SW8270D	11/22/13 00:01	PL	88-74-4	1
2-Nitrophenol	33	ug/L	1	SW8270D	11/22/13 00:01	PL	88-75-5	1
3-Nitroaniline	30	ug/L	1	SW8270D	11/22/13 00:01	PL	99-09-2	1
4-Nitroaniline	34	ug/L	1	SW8270D	11/22/13 00:01	PL	100-01-6	1
4-Nitrophenol	33	ug/L	1	SW8270D	11/22/13 00:01	PL	100-02-7	1
N-Nitrosodi-n-propylamine	35	ug/L	1	SW8270D	11/22/13 00:01	PL	621-64-7	1
N-Nitrosodiphenylamine	39	ug/L	1	SW8270D	11/22/13 00:01	PL	86-30-6	1
Naphthalene	33	ug/L	1	SW8270D	11/22/13 00:01	PL	91-20-3	1
Nitrobenzene	50	ug/L	1	SW8270D	11/22/13 00:01	PL	98-95-3	1
di-n-Octyl phthalate	39	ug/L	1	SW8270D	11/22/13 00:01	PL	117-84-0	1
Pentachlorophenol	31	ug/L	1	SW8270D	11/22/13 00:01	PL	87-86-5	1
Phenanthrene	39	ug/L	1	SW8270D	11/22/13 00:01	PL	85-01-8	1
Phenol	21	ug/L	1	SW8270D	11/22/13 00:01	PL	108-95-2	1
Pyrene	41	ug/L	1	SW8270D	11/22/13 00:01	PL	129-00-0	1
2,4,5-Trichlorophenol	34	ug/L	1	SW8270D	11/22/13 00:01	PL	95-95-4	1

1-Sample spiked at 0.051 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S58941.03 (continued)
Sample Tag: MW-12-14 (111113) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	34	ug/L	1	SW8270D	11/22/13 00:01	PL	88-06-2	1
Hexachlorobenzene	36	ug/L	1	SW8270D	11/22/13 00:01	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	50	ug/L	5	SW8260B - SIM	11/20/13 20:38	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	49	ug/L	1	SW8260C	11/21/13 13:51	WAT	76-13-1	2
Acetone	43	ug/L	10	SW8260C	11/21/13 13:51	WAT	67-64-1	2
Carbon disulfide	42	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-15-0	2
Methyl Acetate	47	ug/L	10	SW8260C	11/21/13 13:51	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	50	ug/L	1	SW8260C	11/21/13 13:51	WAT	1634-04-4	2
2-Butanone (MEK)	45	ug/L	10	SW8260C	11/21/13 13:51	WAT	78-93-3	2
Dichlorodifluoromethane	42	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-71-8	2
Chloromethane	42	ug/L	1	SW8260C	11/21/13 13:51	WAT	74-87-3	2
Vinyl chloride	46	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-01-4	2
Bromomethane	47	ug/L	1	SW8260C	11/21/13 13:51	WAT	74-83-9	2
Chloroethane	48	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-00-3	2
Trichlorofluoromethane	48	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-69-4	2
1,1-Dichloroethene	45	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-35-4	2
Methylene chloride	46	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-09-2	2
trans-1,2-Dichloroethene	46	ug/L	1	SW8260C	11/21/13 13:51	WAT	156-60-5	2
1,1-Dichloroethane	48	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-34-3	2
cis-1,2-Dichloroethene	50	ug/L	1	SW8260C	11/21/13 13:51	WAT	156-59-2	2
Chloroform	48	ug/L	1	SW8260C	11/21/13 13:51	WAT	67-66-3	2
1,1,1-Trichloroethane	50	ug/L	1	SW8260C	11/21/13 13:51	WAT	71-55-6	2
Cyclohexane	45	ug/L	1	SW8260C	11/21/13 13:51	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	55	ug/L	10	SW8260C	11/21/13 13:51	WAT	108-10-1	2
2-Hexanone	52	ug/L	10	SW8260C	11/21/13 13:51	WAT	591-78-6	2
Carbon tetrachloride	52	ug/L	1	SW8260C	11/21/13 13:51	WAT	56-23-5	2
Benzene	49	ug/L	1	SW8260C	11/21/13 13:51	WAT	71-43-2	2
1,2-Dichloroethane	47	ug/L	1	SW8260C	11/21/13 13:51	WAT	107-06-2	2
Trichloroethene	51	ug/L	1	SW8260C	11/21/13 13:51	WAT	79-01-6	2
1,2-Dichloropropane	49	ug/L	1	SW8260C	11/21/13 13:51	WAT	78-87-5	2
Bromodichloromethane	51	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-27-4	2
Methyl cyclohexane	51	ug/L	1	SW8260C	11/21/13 13:51	WAT	108-87-2	2
cis-1,3-Dichloropropene	54	ug/L	1	SW8260C	11/21/13 13:51	WAT	10061-01-5	2
Toluene	50	ug/L	1	SW8260C	11/21/13 13:51	WAT	108-88-3	2
trans-1,3-Dichloropropene	54	ug/L	1	SW8260C	11/21/13 13:51	WAT	10061-02-6	2
1,1,2-Trichloroethane	51	ug/L	1	SW8260C	11/21/13 13:51	WAT	79-00-5	2
Tetrachloroethene	50	ug/L	1	SW8260C	11/21/13 13:51	WAT	127-18-4	2
Dibromochloromethane	56	ug/L	1	SW8260C	11/21/13 13:51	WAT	124-48-1	2
Chlorobenzene	53	ug/L	1	SW8260C	11/21/13 13:51	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	52	ug/L	1	SW8260C	11/21/13 13:51	WAT	79-34-5	2
Ethylbenzene	53	ug/L	1	SW8260C	11/21/13 13:51	WAT	100-41-4	2
p,m-Xylene	104	ug/L	2	SW8260C	11/21/13 13:51	WAT		2
o-Xylene	51	ug/L	1	SW8260C	11/21/13 13:51	WAT	95-47-6	2

1-Sample spiked at 0.051 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S58941.03 (continued)
Sample Tag: MW-12-14 (111113) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	43	ug/L	1	SW8260C	11/21/13 13:51	WAT	100-42-5	1
Isopropylbenzene	54	ug/L	1	SW8260C	11/21/13 13:51	WAT	98-82-8	1
Bromoform	57	ug/L	1	SW8260C	11/21/13 13:51	WAT	75-25-2	1
1,3-Dichlorobenzene	51	ug/L	1	SW8260C	11/21/13 13:51	WAT	541-73-1	1
1,4-Dichlorobenzene	51	ug/L	1	SW8260C	11/21/13 13:51	WAT	106-46-7	1
1,2-Dichlorobenzene	52	ug/L	1	SW8260C	11/21/13 13:51	WAT	95-50-1	1
1,2,4-Trichlorobenzene	59	ug/L	1	SW8260C	11/21/13 13:51	WAT	120-82-1	1
1,2-Dibromoethane	54	ug/L	1	SW8260C	11/21/13 13:51	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	59	ug/L	1	SW8260C	11/21/13 13:51	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S58941.04
Sample Tag: P6-MW-01 (111113)
Collected Date/Time: 11/11/2013 10:50
Matrix: Groundwater
COC Reference: 77098

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/15/13 14:43	EMR		
BNA Extraction (Replicate 01)	Completed			SW3510C	11/21/13 15:21	EMR		F
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7440-36-0	
Arsenic, Dissolved	0.010	mg/L	0.002	SW6020A	11/22/13 15:16	PER	7440-38-2	
Arsenic	0.010	mg/L	0.002	SW6020A	11/22/13 15:13	PER	7440-38-2	
Barium	0.094	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020A	11/22/13 15:13	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:13	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/22/13 15:16	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/22/13 15:13	PER	7439-92-1	
Manganese	0.640	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:04	CCM	7439-97-6	
Nickel	0.021	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:13	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/22/13 15:16	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 15:13	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	11/22/13 15:13	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	56-55-3	

F-Analysis run outside of holding time

Lab Sample ID: S58941.04 (continued)
Sample Tag: P6-MW-01 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/22/13 05:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	85-01-8	

Lab Sample ID: S58941.04 (continued)
Sample Tag: P6-MW-01 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/22/13 05:38	PL	118-74-1	
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	83-32-9	G
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	208-96-8	G
Acetophenone	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	98-86-2	G
Anthracene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	120-12-7	G
Atrazine	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	1912-24-9	G
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	92-52-4	G
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	101-55-3	G
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	84-74-2	G
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	100-52-7	G
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	56-55-3	G
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	50-32-8	G
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	205-99-2	G
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	191-24-2	G
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	207-08-9	G
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	85-68-7	G
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	91-58-7	G
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	95-57-8	G
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	59-50-7	G
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	106-47-8	G
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	7005-72-3	G
Caprolactam	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	105-60-2	G
Carbazole	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	86-74-8	G
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	111-91-1	G
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	111-44-4	G
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	108-60-1	G
Chrysene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	218-01-9	G
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	120-83-2	G
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	105-67-9	G
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	51-28-5	G
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	121-14-2	G
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	606-20-2	G
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	534-52-1	G
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/24/13 17:34	PL	53-70-3	G
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	132-64-9	G
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	84-66-2	G
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	131-11-3	G
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	117-81-7	G
Fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	206-44-0	G
Fluorene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	86-73-7	G
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	87-68-3	G
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	77-47-4	G

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S58941.04 (continued)
Sample Tag: P6-MW-01 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	67-72-1	G
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	193-39-5	G
Isophorone	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	78-59-1	G
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	91-57-6	G
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	95-48-7	G
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	3/4-Cresol	G
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	88-74-4	G
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	88-75-5	G
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	99-09-2	G
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	100-01-6	G
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	100-02-7	G
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	621-64-7	G
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	86-30-6	G
Naphthalene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	91-20-3	G
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	98-95-3	G
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	117-84-0	G
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	87-86-5	G
Phenanthrene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	85-01-8	G
Phenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	108-95-2	G
Pyrene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	129-00-0	G
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	95-95-4	G
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	88-06-2	G
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/24/13 17:34	PL	118-74-1	G
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 15:30	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 17:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 17:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 17:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	110-82-7	

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S58941.04 (continued)
Sample Tag: P6-MW-01 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 17:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 17:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 17:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 17:29	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58941.05
Sample Tag: P6-SB-18 (111113)
Collected Date/Time: 11/11/2013 12:40
Matrix: Groundwater
COC Reference: 77098

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/15/13 14:43	EMR		
BNA Extraction (Replicate 01)	Completed			SW3510C	11/21/13 15:21	EMR		F
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Metals								
Antimony	0.006	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7440-36-0	
Arsenic, Dissolved	0.006	mg/L	0.002	SW6020A	11/22/13 15:20	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020A	11/22/13 15:18	PER	7440-38-2	
Barium	0.023	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020A	11/22/13 15:18	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:18	PER	7440-43-9	
Chromium	0.005	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7440-48-4	
Copper	0.020	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7440-50-8	
Lead, Dissolved	0.005	mg/L	0.003	SW6020A	11/22/13 15:20	PER	7439-92-1	
Lead	0.021	mg/L	0.003	SW6020A	11/22/13 15:18	PER	7439-92-1	
Manganese	0.170	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:06	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:18	PER	7440-22-4	
Vanadium, Dissolved	0.020	mg/L	0.004	SW6020A	11/22/13 15:20	PER	7440-62-2	
Vanadium	0.021	mg/L	0.004	SW6020A	11/22/13 15:18	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 15:18	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	83-32-9	S
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	208-96-8	S
Acetophenone	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	98-86-2	S
Anthracene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	92-52-4	S
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	100-52-7	S

F-Analysis run outside of holding time
S-Surrogate recovery outside of control limits

Lab Sample ID: S58941.05 (continued)
Sample Tag: P6-SB-18 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	91-58-7	S
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	95-57-8	S
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	7005-72-3	S
Caprolactam	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	111-91-1	S
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	111-44-4	S
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	108-60-1	S
Chrysene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	51-28-5	S
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	121-14-2	S
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	606-20-2	S
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/22/13 06:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	132-64-9	S
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	84-66-2	S
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	131-11-3	S
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	86-73-7	S
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	77-47-4	S
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	95-48-7	S
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	3/4-Cresol	S
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	88-74-4	S
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	99-09-2	S
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	100-01-6	S
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	100-02-7	S
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	621-64-7	S
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	117-84-0	

S-Surrogate recovery outside of control limits

Lab Sample ID: S58941.05 (continued)
Sample Tag: P6-SB-18 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	108-95-2	S
Pyrene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	95-95-4	S
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	88-06-2	S
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/22/13 06:12	PL	118-74-1	
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	83-32-9	G
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	208-96-8	G
Acetophenone	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	98-86-2	G
Anthracene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	120-12-7	G
Atrazine	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	1912-24-9	G
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	92-52-4	G
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	101-55-3	G
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	84-74-2	G
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	100-52-7	G
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	56-55-3	G
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	50-32-8	G
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	205-99-2	G
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	191-24-2	G
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	207-08-9	G
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	85-68-7	G
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	91-58-7	G
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	95-57-8	G
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	59-50-7	G
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	106-47-8	G
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	7005-72-3	G
Caprolactam	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	105-60-2	G
Carbazole	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	86-74-8	G
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	111-91-1	G
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	111-44-4	G
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	108-60-1	G
Chrysene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	218-01-9	G
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	120-83-2	G
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	105-67-9	G
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	51-28-5	G
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	121-14-2	G
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	606-20-2	G
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	534-52-1	G
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/24/13 18:07	PL	53-70-3	G
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	132-64-9	G
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	84-66-2	G
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	131-11-3	G
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/24/13 18:07	PL	117-81-7	G
Fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	206-44-0	G

S-Surrogate recovery outside of control limits
G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S58941.05 (continued)
Sample Tag: P6-SB-18 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
Fluorene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	86-73-7	G
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	87-68-3	G
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	77-47-4	G
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	67-72-1	G
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	193-39-5	G
Isophorone	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	78-59-1	G
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	91-57-6	G
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	95-48-7	G
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	3/4-Cresol	G
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	88-74-4	G
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	88-75-5	G
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	99-09-2	G
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	100-01-6	G
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	100-02-7	G
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	621-64-7	G
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	86-30-6	G
Naphthalene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	91-20-3	G
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	98-95-3	G
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	117-84-0	G
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	87-86-5	G
Phenanthrene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	85-01-8	G
Phenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	108-95-2	G
Pyrene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	129-00-0	G
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	95-95-4	G
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	88-06-2	G
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/24/13 18:07	PL	118-74-1	G
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 15:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 17:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 17:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 17:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	156-59-2	

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S58941.05 (continued)
Sample Tag: P6-SB-18 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 17:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 17:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 17:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 17:49	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58941.06
Sample Tag: Dup #4
Collected Date/Time: 11/11/2013 00:01
Matrix: Groundwater
COC Reference: 77098

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Metals								
Antimony	0.006	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7440-36-0	
Arsenic, Dissolved	0.006	mg/L	0.002	SW6020A	11/22/13 15:24	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020A	11/22/13 15:22	PER	7440-38-2	
Barium	0.024	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020A	11/22/13 15:22	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:22	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7440-48-4	
Copper	0.020	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7440-50-8	
Lead, Dissolved	0.004	mg/L	0.003	SW6020A	11/22/13 15:24	PER	7439-92-1	
Lead	0.021	mg/L	0.003	SW6020A	11/22/13 15:22	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:08	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:22	PER	7440-22-4	
Vanadium, Dissolved	0.020	mg/L	0.004	SW6020A	11/22/13 15:24	PER	7440-62-2	
Vanadium	0.021	mg/L	0.004	SW6020A	11/22/13 15:22	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	11/22/13 15:22	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	205-99-2	

Lab Sample ID: S58941.06 (continued)
Sample Tag: Dup #4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/22/13 00:35	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	129-00-0	

Lab Sample ID: S58941.06 (continued)
Sample Tag: Dup #4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/22/13 00:35	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 16:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 18:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 18:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 18:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 18:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 18:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 18:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	100-42-5	

Lab Sample ID: S58941.06 (continued)
Sample Tag: Dup #4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 18:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58941.07
Sample Tag: P6-SB-37 (111113)
Collected Date/Time: 11/11/2013 15:35
Matrix: Groundwater
COC Reference: 77098

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
Metal Digestion	Completed			SW3015A	11/22/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020A	11/22/13 15:28	PER	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020A	11/22/13 15:26	PER	7440-38-2	
Barium, Dissolved	0.020	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7440-39-3	
Barium	0.023	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7440-39-3	
Boron, Dissolved	0.15	mg/L	0.04	SW6020A	11/22/13 15:28	PER	7440-42-8	
Boron	0.15	mg/L	0.04	SW6020A	11/22/13 15:26	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:28	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:26	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/22/13 15:28	PER	7439-92-1	
Lead	0.003	mg/L	0.003	SW6020A	11/22/13 15:26	PER	7439-92-1	
Manganese, Dissolved	0.016	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7439-96-5	
Manganese	0.043	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:12	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:10	CCM	7439-97-6	
Nickel, Dissolved	0.009	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7440-02-0	
Nickel	0.023	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:28	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 15:26	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/22/13 15:28	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 15:26	PER	7440-62-2	
Zinc, Dissolved	0.006	mg/L	0.005	SW6020A	11/22/13 15:28	PER	7440-66-6	
Zinc	0.007	mg/L	0.005	SW6020A	11/22/13 15:26	PER	7440-66-6	

Lab Sample ID: S58941.07 (continued)
Sample Tag: P6-SB-37 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	120-83-2	
2,4-Dimethylphenol	1	ug/L	1	SW8270D	11/22/13 01:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/22/13 01:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/22/13 01:09	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S58941.07 (continued)
Sample Tag: P6-SB-37 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/22/13 01:09	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 16:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 18:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 18:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 18:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 18:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 18:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-27-4	

Lab Sample ID: S58941.07 (continued)
Sample Tag: P6-SB-37 (111113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 18:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 18:29	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58941.08
Sample Tag: Trip Blank
Collected Date/Time: 11/11/2013 07:10
Matrix: Liquid
COC Reference: 77098

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 16:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 18:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 18:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 18:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 18:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 18:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	79-34-5	

Lab Sample ID: S58941.08 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 18:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 18:49	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77098

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448.01.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Sterling

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☒ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCLVOC, 1-4 Dioxane 8260 SIM	TCL SVOC	TAL metals	Diss Arsenic, Polyunsaturated	Diss Methane, Ethane, Ethene					
58941.01	11/11	0915	MW-12-14 (11 11 13)	GW	6	2	3	1					X	X	X							
.02	11/11	0915	MW-12-14 (11 11 13) MS	GW	6	2	3	1					X	X	X							
.03	11/11	0915	MW-12-14 (11 11 13) MSD	GW	6	2	3	1					X	X	X							
.04	11/11	1050	PG-MW-01 (11 11 13)	GW	7	2	3	2					X	X	X	X						
.05	11/11	1240	PG-SB-18 (11 11 13)	GW	7	2	3	2					X	X	X	X						
.06	11/11		DUP #4	GW	7	2	3	2					X	X	X	X						
.07	11/11	1535	PG-SB-37 (11 11 13)	GW	7	2	3	2					X	X	X	X						
.08	11/11	0710	TRIP BLANK	L	1		1						X									

NO S

RELINQUISHED BY: SIGNATURE/ORGANIZATION	X Sampler	DATE 11/11/13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	PM STORAGE	DATE 11/11/13	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-12-13	TIME 845

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-12-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kim George	DATE 11/12/13	TIME 945

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58924.01(01)
Generated on 11/25/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

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Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58924.01-S58924.02
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/08/2013
Submitted Date/Time: 11/11/2013 09:45
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58924.01	MW-12-12 (11813)	Groundwater	11/08/2013 14:50
S58924.02	Trip Blank	Liquid	11/08/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58924.01
Sample Tag: MW-12-12 (11813)
Collected Date/Time: 11/08/2013 14:50
Matrix: Groundwater
COC Reference: 77075

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.7	IR
2	1L Amber	None	Yes	5.7	IR
2	125ml Plastic	HNO3	Yes	5.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/15/13 14:43	EMR		
BNA Extraction (Replicate 01)	Completed			SW3510C	11/21/13 15:21	EMR		F
Mercury Digestion	Completed			SW7471B	11/15/13 09:00	CCM		
Mercury Digestion	Completed			SW7471B	11/15/13 09:00	CCM		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
Metal Digestion	Completed			SW3015A	11/22/13 10:45	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 12:41	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7440-36-0	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020A	11/22/13 14:06	PER	7440-38-2	
Arsenic	0.009	mg/L	0.002	SW6020A	11/22/13 14:01	PER	7440-38-2	
Barium, Dissolved	0.087	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7440-39-3	
Barium	0.116	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020A	11/22/13 14:06	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020A	11/22/13 14:01	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 14:06	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/22/13 14:01	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7440-47-3	
Chromium	0.232	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7440-47-3	
Cobalt, Dissolved	0.007	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7440-48-4	
Cobalt	0.014	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7440-50-8	
Copper	0.016	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/22/13 14:06	PER	7439-92-1	
Lead	0.003	mg/L	0.003	SW6020A	11/22/13 14:01	PER	7439-92-1	
Manganese, Dissolved	0.284	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7439-96-5	
Manganese	0.452	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/15/13 14:08	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 14:06	CCM	7439-97-6	
Nickel, Dissolved	0.152	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7440-02-0	
Nickel	0.268	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/22/13 14:06	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/22/13 14:01	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/22/13 14:06	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/22/13 14:01	PER	7440-62-2	
Zinc, Dissolved	0.006	mg/L	0.005	SW6020A	11/22/13 14:06	PER	7440-66-6	

F-Analysis run outside of holding time

Lab Sample ID: S58924.01 (continued)
Sample Tag: MW-12-12 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Zinc	0.022	mg/L	0.005	SW6020A	11/22/13 14:01	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/20/13 19:18	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	95-48-7	

Lab Sample ID: S58924.01 (continued)
Sample Tag: MW-12-12 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/20/13 19:18	PL	118-74-1	
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	83-32-9	G
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	208-96-8	G
Acetophenone	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	98-86-2	G
Anthracene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	120-12-7	G
Atrazine	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	1912-24-9	G
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	92-52-4	G
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	101-55-3	G
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	84-74-2	G
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	100-52-7	G
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	56-55-3	G
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	50-32-8	G
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	205-99-2	G
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	191-24-2	G
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	207-08-9	G
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	85-68-7	G
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	91-58-7	G
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	95-57-8	G
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	59-50-7	G
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	106-47-8	G
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	7005-72-3	G
Caprolactam	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	105-60-2	G
Carbazole	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	86-74-8	G
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	111-91-1	G
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	111-44-4	G
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	108-60-1	G
Chrysene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	218-01-9	G
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	120-83-2	G
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	105-67-9	G

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S58924.01 (continued)
Sample Tag: MW-12-12 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	51-28-5	G
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	121-14-2	G
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	606-20-2	G
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	534-52-1	G
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/24/13 05:19	PL	53-70-3	G
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	132-64-9	G
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	84-66-2	G
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	131-11-3	G
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	117-81-7	G
Fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	206-44-0	G
Fluorene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	86-73-7	G
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	87-68-3	G
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	77-47-4	G
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	67-72-1	G
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	193-39-5	G
Isophorone	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	78-59-1	G
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	91-57-6	G
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	95-48-7	G
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	3/4-Cresol	G
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	88-74-4	G
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	88-75-5	G
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	99-09-2	G
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	100-01-6	G
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	100-02-7	G
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	621-64-7	G
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	86-30-6	G
Naphthalene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	91-20-3	G
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	98-95-3	G
di-n-Octyl phthalate	1	ug/L	1	SW8270D	11/24/13 05:19	PL	117-84-0	G
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	87-86-5	G
Phenanthrene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	85-01-8	G
Phenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	108-95-2	G
Pyrene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	129-00-0	G
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	95-95-4	G
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	88-06-2	G
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/24/13 05:19	PL	118-74-1	G
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 14:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/16/13 00:54	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/16/13 00:54	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/16/13 00:54	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-71-8	

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S58924.01 (continued)
Sample Tag: MW-12-12 (11813)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloromethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/16/13 00:54	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/16/13 00:54	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/16/13 00:54	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/16/13 00:54	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58924.02
Sample Tag: Trip Blank
Collected Date/Time: 11/08/2013 00:01
Matrix: Liquid
COC Reference: 77075

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.7	IR
2	0	HNO3	Yes	5.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/21/13 12:41	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/20/13 15:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/16/13 01:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/16/13 01:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/16/13 01:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/16/13 01:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/16/13 01:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	108-90-7	

Lab Sample ID: S58924.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/16/13 01:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/16/13 01:17	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

77075

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B006448 01.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1-4 dioxane Bzes STMN	TCL SVOC	TAL METALS	DISS METALS
58924.01	11/8	1450	MW-12-12 (1813)	GW	7	2	3	2					X	X	X	X
.02	11/8	-	Trip Blank	L	1		1						X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/8/13	TIME 1530
RECEIVED BY: SIGNATURE/ORGANIZATION	Ron Storage	DATE 11/8/13	TIME 1600
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Mes	DATE 11-11-13	TIME 845

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Mes	DATE 11-11-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Thom George	DATE 11/12/13	TIME 945

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.7

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev 5.18.12

Analytical Laboratory Report

Report ID: S58993.01(01)
Generated on 12/03/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58993.01-S58993.08
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/13/2013
Submitted Date/Time: 11/14/2013 09:00
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58993.01	Field Blank-1 (11132013)	Liquid	11/13/2013 08:00
S58993.02	Trip Blank (11132013)	Liquid	11/13/2013 00:01
S58993.03	P3-SB-28 (11132013)	Groundwater	11/13/2013 11:20
S58993.04	P3-SB-28 (11132013) MS	Groundwater	11/13/2013 11:20
S58993.05	P3-SB-28 (11132013) MSD	Groundwater	11/13/2013 11:20
S58993.06	CH-14-RO (11132013)	Groundwater	11/13/2013 14:15
S58993.07	MW-22 (11132013)	Groundwater	11/13/2013 16:25
S58993.08	Equipment Blank-7 (11132013)	Liquid	11/13/2013 17:00

Analytical Laboratory Report

Lab Sample ID: S58993.01
Sample Tag: Field Blank-1 (11132013)
Collected Date/Time: 11/13/2013 08:00
Matrix: Liquid
COC Reference: 79787

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 16:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	117-81-7	

Lab Sample ID: S58993.01 (continued)
Sample Tag: Field Blank-1 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 16:27	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 15:47	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 02:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 02:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 02:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	156-59-2	

Lab Sample ID: S58993.01 (continued)
Sample Tag: Field Blank-1 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 02:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 02:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 02:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:44	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58993.02
Sample Tag: Trip Blank (11132013)
Collected Date/Time: 11/13/2013 00:01
Matrix: Liquid
COC Reference: 79787

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 16:05	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 03:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 03:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 03:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 03:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 03:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	79-34-5	

Lab Sample ID: S58993.02 (continued)
Sample Tag: Trip Blank (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 03:06	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:06	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58993.03
Sample Tag: P3-SB-28 (11132013)
Collected Date/Time: 11/13/2013 11:20
Matrix: Groundwater
COC Reference: 79787

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR
1	125ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	SM3500-Cr B	11/14/13 11:10	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020A	12/02/13 17:45	PER	7440-38-2	
Barium	0.036	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7440-39-3	
Boron	0.17	mg/L	0.04	SW6020A	12/02/13 17:45	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:45	PER	7440-43-9	
Chromium	0.005	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:45	PER	7439-92-1	
Manganese	0.287	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:24	CCM	7439-97-6	
Nickel	0.007	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:45	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:45	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/02/13 17:45	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	205-99-2	

Lab Sample ID: S58993.03 (continued)
Sample Tag: P3-SB-28 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 17:01	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	129-00-0	

Lab Sample ID: S58993.03 (continued)
Sample Tag: P3-SB-28 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 17:01	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 16:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 02:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 02:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 02:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 02:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 02:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 02:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	100-42-5	

Lab Sample ID: S58993.03 (continued)
Sample Tag: P3-SB-28 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:22	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58993.04
Sample Tag: P3-SB-28 (11132013) MS
Collected Date/Time: 11/13/2013 11:20
Matrix: Groundwater
COC Reference: 79787

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR
1	125ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Inorganics								
Chromium VI	0.199	mg/L	0.01	SM3500-Cr B	11/14/13 11:20	JKB	18540-29-9	
Metals								
Antimony	0.259	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7440-36-0	
Arsenic	0.253	mg/L	0.002	SW6020A	12/02/13 17:48	PER	7440-38-2	
Barium	0.295	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7440-39-3	
Boron	0.41	mg/L	0.04	SW6020A	12/02/13 17:48	PER	7440-42-8	
Cadmium	0.262	mg/L	0.0005	SW6020A	12/02/13 17:48	PER	7440-43-9	
Chromium	0.252	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7440-47-3	
Cobalt	0.240	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7440-48-4	
Copper	0.244	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7440-50-8	
Lead	0.242	mg/L	0.003	SW6020A	12/02/13 17:48	PER	7439-92-1	
Manganese	0.521	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471B	11/18/13 17:26	CCM	7439-97-6	
Nickel	0.240	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7440-02-0	
Selenium	0.250	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7782-49-2	
Silver	0.251	mg/L	0.0005	SW6020A	12/02/13 17:48	PER	7440-22-4	
Vanadium	0.256	mg/L	0.004	SW6020A	12/02/13 17:48	PER	7440-62-2	
Zinc	0.245	mg/L	0.005	SW6020A	12/02/13 17:48	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	42	ug/L	1	SW8270D	11/26/13 17:35	PL	83-32-9	1
Acenaphthylene	45	ug/L	1	SW8270D	11/26/13 17:35	PL	208-96-8	1
Acetophenone	40	ug/L	1	SW8270D	11/26/13 17:35	PL	98-86-2	1
Anthracene	43	ug/L	1	SW8270D	11/26/13 17:35	PL	120-12-7	1
Atrazine	36	ug/L	1	SW8270D	11/26/13 17:35	PL	1912-24-9	1
1,1'-Biphenyl	42	ug/L	1	SW8270D	11/26/13 17:35	PL	92-52-4	1
4-Bromophenyl phenyl ether	39	ug/L	1	SW8270D	11/26/13 17:35	PL	101-55-3	1
di-n-Butyl phthalate	42	ug/L	1	SW8270D	11/26/13 17:35	PL	84-74-2	1
Benzaldehyde	32	ug/L	1	SW8270D	11/26/13 17:35	PL	100-52-7	1
Benzo(a)anthracene	43	ug/L	1	SW8270D	11/26/13 17:35	PL	56-55-3	1
Benzo(a)pyrene	44	ug/L	1	SW8270D	11/26/13 17:35	PL	50-32-8	1

1-Sample spiked at 0.051 mg/l

Lab Sample ID: S58993.04 (continued)
Sample Tag: P3-SB-28 (11132013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(b)fluoranthene	40	ug/L	1	SW8270D	11/26/13 17:35	PL	205-99-2	1
Benzo(ghi)perylene	24	ug/L	1	SW8270D	11/26/13 17:35	PL	191-24-2	1
Benzo(k)fluoranthene	40	ug/L	1	SW8270D	11/26/13 17:35	PL	207-08-9	1
Butyl benzyl phthalate	43	ug/L	1	SW8270D	11/26/13 17:35	PL	85-68-7	1
2-Chloronaphthalene	40	ug/L	1	SW8270D	11/26/13 17:35	PL	91-58-7	1
2-Chlorophenol	38	ug/L	1	SW8270D	11/26/13 17:35	PL	95-57-8	1
4-Chloro-3-methylphenol	41	ug/L	1	SW8270D	11/26/13 17:35	PL	59-50-7	1
4-Chloroaniline	19	ug/L	1	SW8270D	11/26/13 17:35	PL	106-47-8	1
4-Chlorophenyl phenyl ether	43	ug/L	1	SW8270D	11/26/13 17:35	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270D	11/26/13 17:35	PL	105-60-2	1
Carbazole	39	ug/L	1	SW8270D	11/26/13 17:35	PL	86-74-8	1
bis(2-Chloroethoxy)methane	43	ug/L	1	SW8270D	11/26/13 17:35	PL	111-91-1	1
bis(2-Chloroethyl)ether	40	ug/L	1	SW8270D	11/26/13 17:35	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	52	ug/L	1	SW8270D	11/26/13 17:35	PL	108-60-1	1
Chrysene	45	ug/L	1	SW8270D	11/26/13 17:35	PL	218-01-9	1
2,4-Dichlorophenol	41	ug/L	1	SW8270D	11/26/13 17:35	PL	120-83-2	1
2,4-Dimethylphenol	45	ug/L	1	SW8270D	11/26/13 17:35	PL	105-67-9	1
2,4-Dinitrophenol	30	ug/L	1	SW8270D	11/26/13 17:35	PL	51-28-5	1
2,4-Dinitrotoluene	38	ug/L	1	SW8270D	11/26/13 17:35	PL	121-14-2	1
2,6-Dinitrotoluene	40	ug/L	1	SW8270D	11/26/13 17:35	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	35	ug/L	1	SW8270D	11/26/13 17:35	PL	534-52-1	1
Dibenzo(ah)anthracene	27	ug/L	2	SW8270D	11/26/13 17:35	PL	53-70-3	1
Dibenzofuran	43	ug/L	1	SW8270D	11/26/13 17:35	PL	132-64-9	1
Diethyl phthalate	44	ug/L	1	SW8270D	11/26/13 17:35	PL	84-66-2	1
Dimethyl phthalate	44	ug/L	1	SW8270D	11/26/13 17:35	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	43	ug/L	1	SW8270D	11/26/13 17:35	PL	117-81-7	1B
Fluoranthene	42	ug/L	1	SW8270D	11/26/13 17:35	PL	206-44-0	1
Fluorene	42	ug/L	1	SW8270D	11/26/13 17:35	PL	86-73-7	1
Hexachlorobutadiene	31	ug/L	1	SW8270D	11/26/13 17:35	PL	87-68-3	1
Hexachlorocyclopentadiene	30	ug/L	1	SW8270D	11/26/13 17:35	PL	77-47-4	1
Hexachloroethane	32	ug/L	1	SW8270D	11/26/13 17:35	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	27	ug/L	1	SW8270D	11/26/13 17:35	PL	193-39-5	1
Isophorone	47	ug/L	1	SW8270D	11/26/13 17:35	PL	78-59-1	1
2-Methylnaphthalene	37	ug/L	1	SW8270D	11/26/13 17:35	PL	91-57-6	1
2-Methylphenol	45	ug/L	1	SW8270D	11/26/13 17:35	PL	95-48-7	1
3-, 4-Methylphenol	64	ug/L	1	SW8270D	11/26/13 17:35	PL	3/4-Cresol	1
2-Nitroaniline	39	ug/L	1	SW8270D	11/26/13 17:35	PL	88-74-4	1
2-Nitrophenol	39	ug/L	1	SW8270D	11/26/13 17:35	PL	88-75-5	1
3-Nitroaniline	21	ug/L	1	SW8270D	11/26/13 17:35	PL	99-09-2	1
4-Nitroaniline	36	ug/L	1	SW8270D	11/26/13 17:35	PL	100-01-6	1
4-Nitrophenol	29	ug/L	1	SW8270D	11/26/13 17:35	PL	100-02-7	1
N-Nitrosodi-n-propylamine	41	ug/L	1	SW8270D	11/26/13 17:35	PL	621-64-7	1
N-Nitrosodiphenylamine	44	ug/L	1	SW8270D	11/26/13 17:35	PL	86-30-6	1
Naphthalene	39	ug/L	1	SW8270D	11/26/13 17:35	PL	91-20-3	1
Nitrobenzene	56	ug/L	1	SW8270D	11/26/13 17:35	PL	98-95-3	1
di-n-Octyl phthalate	46	ug/L	1	SW8270D	11/26/13 17:35	PL	117-84-0	1
Pentachlorophenol	37	ug/L	1	SW8270D	11/26/13 17:35	PL	87-86-5	1

1-Sample spiked at 0.051 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S58993.04 (continued)
Sample Tag: P3-SB-28 (11132013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenanthrene	44	ug/L	1	SW8270D	11/26/13 17:35	PL	85-01-8	1
Phenol	22	ug/L	1	SW8270D	11/26/13 17:35	PL	108-95-2	1
Pyrene	45	ug/L	1	SW8270D	11/26/13 17:35	PL	129-00-0	1
2,4,5-Trichlorophenol	40	ug/L	1	SW8270D	11/26/13 17:35	PL	95-95-4	1
2,4,6-Trichlorophenol	38	ug/L	1	SW8270D	11/26/13 17:35	PL	88-06-2	1
Hexachlorobenzene	40	ug/L	1	SW8270D	11/26/13 17:35	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	47	ug/L	5	SW8260B - SIM	11/22/13 21:13	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	46	ug/L	1	SW8260C	11/24/13 00:10	WAT	76-13-1	2
Acetone	35	ug/L	10	SW8260C	11/24/13 00:10	WAT	67-64-1	2
Carbon disulfide	45	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-15-0	2
Methyl Acetate	50	ug/L	10	SW8260C	11/24/13 00:10	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	1634-04-4	2
2-Butanone (MEK)	42	ug/L	10	SW8260C	11/24/13 00:10	WAT	78-93-3	2
Dichlorodifluoromethane	55	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-71-8	2
Chloromethane	55	ug/L	1	SW8260C	11/24/13 00:10	WAT	74-87-3	2
Vinyl chloride	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-01-4	2
Bromomethane	51	ug/L	1	SW8260C	11/24/13 00:10	WAT	74-83-9	2
Chloroethane	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-00-3	2
Trichlorofluoromethane	58	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-69-4	2
1,1-Dichloroethene	53	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-35-4	2
Methylene chloride	47	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-09-2	2
trans-1,2-Dichloroethene	52	ug/L	1	SW8260C	11/24/13 00:10	WAT	156-60-5	2
1,1-Dichloroethane	50	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-34-3	2
cis-1,2-Dichloroethene	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	156-59-2	2
Chloroform	53	ug/L	1	SW8260C	11/24/13 00:10	WAT	67-66-3	2
1,1,1-Trichloroethane	58	ug/L	1	SW8260C	11/24/13 00:10	WAT	71-55-6	2
Cyclohexane	51	ug/L	1	SW8260C	11/24/13 00:10	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	54	ug/L	10	SW8260C	11/24/13 00:10	WAT	108-10-1	2
2-Hexanone	50	ug/L	10	SW8260C	11/24/13 00:10	WAT	591-78-6	2
Carbon tetrachloride	60	ug/L	1	SW8260C	11/24/13 00:10	WAT	56-23-5	2
Benzene	47	ug/L	1	SW8260C	11/24/13 00:10	WAT	71-43-2	2
1,2-Dichloroethane	56	ug/L	1	SW8260C	11/24/13 00:10	WAT	107-06-2	2
Trichloroethene	50	ug/L	1	SW8260C	11/24/13 00:10	WAT	79-01-6	2
1,2-Dichloropropane	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	78-87-5	2
Bromodichloromethane	57	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-27-4	2
Methyl cyclohexane	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	108-87-2	2
cis-1,3-Dichloropropene	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	10061-01-5	2
Toluene	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	108-88-3	2
trans-1,3-Dichloropropene	50	ug/L	1	SW8260C	11/24/13 00:10	WAT	10061-02-6	2
1,1,2-Trichloroethane	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	79-00-5	2
Tetrachloroethene	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	127-18-4	2
Dibromochloromethane	50	ug/L	1	SW8260C	11/24/13 00:10	WAT	124-48-1	2
Chlorobenzene	46	ug/L	1	SW8260C	11/24/13 00:10	WAT	108-90-7	2

1-Sample spiked at 0.051 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S58993.04 (continued)
Sample Tag: P3-SB-28 (11132013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	47	ug/L	1	SW8260C	11/24/13 00:10	WAT	79-34-5	1
Ethylbenzene	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	100-41-4	1
p,m-Xylene	92	ug/L	2	SW8260C	11/24/13 00:10	WAT		1
o-Xylene	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	95-47-6	1
Styrene	47	ug/L	1	SW8260C	11/24/13 00:10	WAT	100-42-5	1
Isopropylbenzene	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	98-82-8	1
Bromoform	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	75-25-2	1
1,3-Dichlorobenzene	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	541-73-1	1
1,4-Dichlorobenzene	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	106-46-7	1
1,2-Dichlorobenzene	48	ug/L	1	SW8260C	11/24/13 00:10	WAT	95-50-1	1
1,2,4-Trichlorobenzene	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	120-82-1	1
1,2-Dibromoethane	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	49	ug/L	1	SW8260C	11/24/13 00:10	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S58993.05
Sample Tag: P3-SB-28 (11132013) MSD
Collected Date/Time: 11/13/2013 11:20
Matrix: Groundwater
COC Reference: 79787

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR
1	125ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Inorganics								
Chromium VI	0.197	mg/L	0.01	SM3500-Cr B	11/14/13 11:25	JKB	18540-29-9	
Metals								
Antimony	0.258	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7440-36-0	
Arsenic	0.258	mg/L	0.002	SW6020A	12/02/13 17:50	PER	7440-38-2	
Barium	0.294	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7440-39-3	
Boron	0.43	mg/L	0.04	SW6020A	12/02/13 17:50	PER	7440-42-8	
Cadmium	0.254	mg/L	0.0005	SW6020A	12/02/13 17:50	PER	7440-43-9	
Chromium	0.248	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7440-47-3	
Cobalt	0.238	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7440-48-4	
Copper	0.243	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7440-50-8	
Lead	0.242	mg/L	0.003	SW6020A	12/02/13 17:50	PER	7439-92-1	
Manganese	0.518	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471B	11/18/13 17:28	CCM	7439-97-6	
Nickel	0.241	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7440-02-0	
Selenium	0.235	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7782-49-2	
Silver	0.249	mg/L	0.0005	SW6020A	12/02/13 17:50	PER	7440-22-4	
Vanadium	0.252	mg/L	0.004	SW6020A	12/02/13 17:50	PER	7440-62-2	
Zinc	0.243	mg/L	0.005	SW6020A	12/02/13 17:50	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	41	ug/L	1	SW8270D	11/26/13 18:09	PL	83-32-9	1
Acenaphthylene	44	ug/L	1	SW8270D	11/26/13 18:09	PL	208-96-8	1
Acetophenone	40	ug/L	1	SW8270D	11/26/13 18:09	PL	98-86-2	1
Anthracene	43	ug/L	1	SW8270D	11/26/13 18:09	PL	120-12-7	1
Atrazine	36	ug/L	1	SW8270D	11/26/13 18:09	PL	1912-24-9	1
1,1'-Biphenyl	42	ug/L	1	SW8270D	11/26/13 18:09	PL	92-52-4	1
4-Bromophenyl phenyl ether	40	ug/L	1	SW8270D	11/26/13 18:09	PL	101-55-3	1
di-n-Butyl phthalate	42	ug/L	1	SW8270D	11/26/13 18:09	PL	84-74-2	1
Benzaldehyde	30	ug/L	1	SW8270D	11/26/13 18:09	PL	100-52-7	1
Benzo(a)anthracene	44	ug/L	1	SW8270D	11/26/13 18:09	PL	56-55-3	1
Benzo(a)pyrene	45	ug/L	1	SW8270D	11/26/13 18:09	PL	50-32-8	1

1-Sample spiked at 0.051 mg/l

Lab Sample ID: S58993.05 (continued)
Sample Tag: P3-SB-28 (11132013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(b)fluoranthene	41	ug/L	1	SW8270D	11/26/13 18:09	PL	205-99-2	1
Benzo(ghi)perylene	24	ug/L	1	SW8270D	11/26/13 18:09	PL	191-24-2	1
Benzo(k)fluoranthene	40	ug/L	1	SW8270D	11/26/13 18:09	PL	207-08-9	1
Butyl benzyl phthalate	44	ug/L	1	SW8270D	11/26/13 18:09	PL	85-68-7	1
2-Chloronaphthalene	40	ug/L	1	SW8270D	11/26/13 18:09	PL	91-58-7	1
2-Chlorophenol	37	ug/L	1	SW8270D	11/26/13 18:09	PL	95-57-8	1
4-Chloro-3-methylphenol	40	ug/L	1	SW8270D	11/26/13 18:09	PL	59-50-7	1
4-Chloroaniline	19	ug/L	1	SW8270D	11/26/13 18:09	PL	106-47-8	1
4-Chlorophenyl phenyl ether	42	ug/L	1	SW8270D	11/26/13 18:09	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270D	11/26/13 18:09	PL	105-60-2	1
Carbazole	39	ug/L	1	SW8270D	11/26/13 18:09	PL	86-74-8	1
bis(2-Chloroethoxy)methane	42	ug/L	1	SW8270D	11/26/13 18:09	PL	111-91-1	1
bis(2-Chloroethyl)ether	39	ug/L	1	SW8270D	11/26/13 18:09	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	52	ug/L	1	SW8270D	11/26/13 18:09	PL	108-60-1	1
Chrysene	46	ug/L	1	SW8270D	11/26/13 18:09	PL	218-01-9	1
2,4-Dichlorophenol	39	ug/L	1	SW8270D	11/26/13 18:09	PL	120-83-2	1
2,4-Dimethylphenol	44	ug/L	1	SW8270D	11/26/13 18:09	PL	105-67-9	1
2,4-Dinitrophenol	32	ug/L	1	SW8270D	11/26/13 18:09	PL	51-28-5	1
2,4-Dinitrotoluene	38	ug/L	1	SW8270D	11/26/13 18:09	PL	121-14-2	1
2,6-Dinitrotoluene	39	ug/L	1	SW8270D	11/26/13 18:09	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	34	ug/L	1	SW8270D	11/26/13 18:09	PL	534-52-1	1
Dibenzo(ah)anthracene	28	ug/L	2	SW8270D	11/26/13 18:09	PL	53-70-3	1
Dibenzofuran	42	ug/L	1	SW8270D	11/26/13 18:09	PL	132-64-9	1
Diethyl phthalate	43	ug/L	1	SW8270D	11/26/13 18:09	PL	84-66-2	1
Dimethyl phthalate	43	ug/L	1	SW8270D	11/26/13 18:09	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	44	ug/L	1	SW8270D	11/26/13 18:09	PL	117-81-7	1B
Fluoranthene	42	ug/L	1	SW8270D	11/26/13 18:09	PL	206-44-0	1
Fluorene	42	ug/L	1	SW8270D	11/26/13 18:09	PL	86-73-7	1
Hexachlorobutadiene	31	ug/L	1	SW8270D	11/26/13 18:09	PL	87-68-3	1
Hexachlorocyclopentadiene	27	ug/L	1	SW8270D	11/26/13 18:09	PL	77-47-4	1
Hexachloroethane	32	ug/L	1	SW8270D	11/26/13 18:09	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	27	ug/L	1	SW8270D	11/26/13 18:09	PL	193-39-5	1
Isophorone	46	ug/L	1	SW8270D	11/26/13 18:09	PL	78-59-1	1
2-Methylnaphthalene	36	ug/L	1	SW8270D	11/26/13 18:09	PL	91-57-6	1
2-Methylphenol	42	ug/L	1	SW8270D	11/26/13 18:09	PL	95-48-7	1
3-, 4-Methylphenol	62	ug/L	1	SW8270D	11/26/13 18:09	PL	3/4-Cresol	1
2-Nitroaniline	39	ug/L	1	SW8270D	11/26/13 18:09	PL	88-74-4	1
2-Nitrophenol	38	ug/L	1	SW8270D	11/26/13 18:09	PL	88-75-5	1
3-Nitroaniline	21	ug/L	1	SW8270D	11/26/13 18:09	PL	99-09-2	1
4-Nitroaniline	36	ug/L	1	SW8270D	11/26/13 18:09	PL	100-01-6	1
4-Nitrophenol	28	ug/L	1	SW8270D	11/26/13 18:09	PL	100-02-7	1
N-Nitrosodi-n-propylamine	40	ug/L	1	SW8270D	11/26/13 18:09	PL	621-64-7	1
N-Nitrosodiphenylamine	44	ug/L	1	SW8270D	11/26/13 18:09	PL	86-30-6	1
Naphthalene	38	ug/L	1	SW8270D	11/26/13 18:09	PL	91-20-3	1
Nitrobenzene	56	ug/L	1	SW8270D	11/26/13 18:09	PL	98-95-3	1
di-n-Octyl phthalate	48	ug/L	1	SW8270D	11/26/13 18:09	PL	117-84-0	1
Pentachlorophenol	36	ug/L	1	SW8270D	11/26/13 18:09	PL	87-86-5	1

1-Sample spiked at 0.051 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S58993.05 (continued)
Sample Tag: P3-SB-28 (11132013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Phenanthrene	44	ug/L	1	SW8270D	11/26/13 18:09	PL	85-01-8	1
Phenol	22	ug/L	1	SW8270D	11/26/13 18:09	PL	108-95-2	1
Pyrene	46	ug/L	1	SW8270D	11/26/13 18:09	PL	129-00-0	1
2,4,5-Trichlorophenol	39	ug/L	1	SW8270D	11/26/13 18:09	PL	95-95-4	1
2,4,6-Trichlorophenol	39	ug/L	1	SW8270D	11/26/13 18:09	PL	88-06-2	1
Hexachlorobenzene	40	ug/L	1	SW8270D	11/26/13 18:09	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	52	ug/L	5	SW8260B - SIM	11/22/13 21:31	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	44	ug/L	1	SW8260C	11/24/13 00:32	WAT	76-13-1	2
Acetone	34	ug/L	10	SW8260C	11/24/13 00:32	WAT	67-64-1	2
Carbon disulfide	44	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-15-0	2
Methyl Acetate	49	ug/L	10	SW8260C	11/24/13 00:32	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	1634-04-4	2
2-Butanone (MEK)	41	ug/L	10	SW8260C	11/24/13 00:32	WAT	78-93-3	2
Dichlorodifluoromethane	53	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-71-8	2
Chloromethane	55	ug/L	1	SW8260C	11/24/13 00:32	WAT	74-87-3	2
Vinyl chloride	49	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-01-4	2
Bromomethane	50	ug/L	1	SW8260C	11/24/13 00:32	WAT	74-83-9	2
Chloroethane	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-00-3	2
Trichlorofluoromethane	56	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-69-4	2
1,1-Dichloroethene	51	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-35-4	2
Methylene chloride	46	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260C	11/24/13 00:32	WAT	156-60-5	2
1,1-Dichloroethane	49	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-34-3	2
cis-1,2-Dichloroethene	47	ug/L	1	SW8260C	11/24/13 00:32	WAT	156-59-2	2
Chloroform	51	ug/L	1	SW8260C	11/24/13 00:32	WAT	67-66-3	2
1,1,1-Trichloroethane	56	ug/L	1	SW8260C	11/24/13 00:32	WAT	71-55-6	2
Cyclohexane	50	ug/L	1	SW8260C	11/24/13 00:32	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	54	ug/L	10	SW8260C	11/24/13 00:32	WAT	108-10-1	2
2-Hexanone	50	ug/L	10	SW8260C	11/24/13 00:32	WAT	591-78-6	2
Carbon tetrachloride	60	ug/L	1	SW8260C	11/24/13 00:32	WAT	56-23-5	2
Benzene	47	ug/L	1	SW8260C	11/24/13 00:32	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260C	11/24/13 00:32	WAT	107-06-2	2
Trichloroethene	51	ug/L	1	SW8260C	11/24/13 00:32	WAT	79-01-6	2
1,2-Dichloropropane	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	78-87-5	2
Bromodichloromethane	57	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-27-4	2
Methyl cyclohexane	49	ug/L	1	SW8260C	11/24/13 00:32	WAT	108-87-2	2
cis-1,3-Dichloropropene	49	ug/L	1	SW8260C	11/24/13 00:32	WAT	10061-01-5	2
Toluene	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	108-88-3	2
trans-1,3-Dichloropropene	51	ug/L	1	SW8260C	11/24/13 00:32	WAT	10061-02-6	2
1,1,2-Trichloroethane	49	ug/L	1	SW8260C	11/24/13 00:32	WAT	79-00-5	2
Tetrachloroethene	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	127-18-4	2
Dibromochloromethane	49	ug/L	1	SW8260C	11/24/13 00:32	WAT	124-48-1	2
Chlorobenzene	45	ug/L	1	SW8260C	11/24/13 00:32	WAT	108-90-7	2

1-Sample spiked at 0.051 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S58993.05 (continued)
Sample Tag: P3-SB-28 (11132013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	46	ug/L	1	SW8260C	11/24/13 00:32	WAT	79-34-5	1
Ethylbenzene	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	100-41-4	1
p,m-Xylene	90	ug/L	2	SW8260C	11/24/13 00:32	WAT		1
o-Xylene	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	95-47-6	1
Styrene	46	ug/L	1	SW8260C	11/24/13 00:32	WAT	100-42-5	1
Isopropylbenzene	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	98-82-8	1
Bromoform	47	ug/L	1	SW8260C	11/24/13 00:32	WAT	75-25-2	1
1,3-Dichlorobenzene	46	ug/L	1	SW8260C	11/24/13 00:32	WAT	541-73-1	1
1,4-Dichlorobenzene	47	ug/L	1	SW8260C	11/24/13 00:32	WAT	106-46-7	1
1,2-Dichlorobenzene	47	ug/L	1	SW8260C	11/24/13 00:32	WAT	95-50-1	1
1,2,4-Trichlorobenzene	49	ug/L	1	SW8260C	11/24/13 00:32	WAT	120-82-1	1
1,2-Dibromoethane	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	48	ug/L	1	SW8260C	11/24/13 00:32	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S58993.06
Sample Tag: CH-14-RO (11132013)
Collected Date/Time: 11/13/2013 14:15
Matrix: Groundwater
COC Reference: 79787

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR
1	125ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Inorganics								
Chromium VI	23.5	mg/L	0.01	SM3500-Cr B	11/14/13 11:30	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:28	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 17:28	PER	7440-38-2	
Barium	0.052	mg/L	0.005	SW6020A	12/02/13 17:28	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020A	12/02/13 17:28	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:28	PER	7440-43-9	
Chromium	23.0	mg/L	0.25	SW6020A	12/02/13 17:30	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:28	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:28	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:28	PER	7439-92-1	
Manganese	0.009	mg/L	0.005	SW6020A	12/02/13 17:28	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:06	CCM	7439-97-6	
Nickel	0.050	mg/L	0.005	SW6020A	12/02/13 17:28	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020A	12/02/13 17:28	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:28	PER	7440-22-4	
Vanadium	0.252	mg/L	0.004	SW6020A	12/02/13 17:28	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020A	12/02/13 17:28	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	205-99-2	

Lab Sample ID: S58993.06 (continued)
Sample Tag: CH-14-RO (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 18:42	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	129-00-0	

Lab Sample ID: S58993.06 (continued)
Sample Tag: CH-14-RO (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 18:42	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 16:41	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 04:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 04:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 04:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 04:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 04:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 04:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	100-42-5	

Lab Sample ID: S58993.06 (continued)
Sample Tag: CH-14-RO (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 04:11	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58993.07
Sample Tag: MW-22 (11132013)
Collected Date/Time: 11/13/2013 16:25
Matrix: Groundwater
COC Reference: 79787

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR
1	125ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	SM3500-Cr B	11/14/13 11:35	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020A	12/02/13 17:33	PER	7440-38-2	
Barium	0.103	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/02/13 17:33	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:33	PER	7440-43-9	
Chromium	0.008	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:33	PER	7439-92-1	
Manganese	1.00	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:08	CCM	7439-97-6	
Nickel	0.022	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:33	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:33	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	12/02/13 17:33	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	205-99-2	

Lab Sample ID: S58993.07 (continued)
Sample Tag: MW-22 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 19:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	129-00-0	

Lab Sample ID: S58993.07 (continued)
Sample Tag: MW-22 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 19:16	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 17:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 03:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 03:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 03:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 03:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 03:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 03:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	100-42-5	

Lab Sample ID: S58993.07 (continued)
Sample Tag: MW-22 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:28	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58993.08
Sample Tag: Equipment Blank-7 (11132013)
Collected Date/Time: 11/13/2013 17:00
Matrix: Liquid
COC Reference: 79787

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 17:19	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/02/13 17:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:19	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:10	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:19	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/02/13 17:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	91-58-7	

Lab Sample ID: S58993.08 (continued)
Sample Tag: Equipment Blank-7 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 19:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 19:50	PL	118-74-1	

Lab Sample ID: S58993.08 (continued)
Sample Tag: Equipment Blank-7 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 17:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 03:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 03:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 03:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 03:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 03:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 03:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	120-82-1	

Lab Sample ID: S58993.08 (continued)
Sample Tag: Equipment Blank-7 (11132013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:49	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

79787

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	**Randy Christensen**
COMPANY	**ARCADIS**
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	**ARCADIS**
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: **Lansing Plant 3 Project#: B006448.2013.**

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1,4 Dioxane, BTEX, SIM	TCL SVOC	TAL METALS	HEXAVALENT CHROMIUM
58993.01	11/13/13	8:00	Field Blank-1 (11132013)	L	5	2	3						X	X	X	
.02	—	—	Trip Blank (11132013)	L			1						X			
.03,.04,.05	11/13/13	11:20	P3-SB-28 (11132013)	GW	21	9	9	3					X	X	X	X
.06	11/13/13	14:15	CH-14-RO (11132013)	GW	7	3	3	1					X	X	X	X
.07	11/13/13	16:25	MW-22 (11132013)	GW	7	3	3	1					X	X	X	X
.08	11/13/13	17:00	Equipment Blank-1 (11132013)	L	6	2	3	1					X	X	X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Arcadis	☒ Sampler	DATE 11.13.13 TIME 17:35
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 11-14-13 TIME 1715
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 11.14.13 TIME 830

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE 11-13-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George		DATE 11/14/13 TIME 900
SEAL NO.	SEAL INTACT YES☐ NO☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.4
SEAL NO.	SEAL INTACT YES☐ NO☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58994.01(01)
Generated on 12/03/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58994.01-S58994.04
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/13/2013
Submitted Date/Time: 11/14/2013 09:00
Sampled by: Robert Prigge
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58994.01	MW-5(3)	Groundwater	11/13/2013 10:00
S58994.02	MW-02 (UNK-12)	Groundwater	11/13/2013 13:05
S58994.03	Dup-07	Groundwater	11/13/2013 00:01
S58994.04	Trip Blank	Liquid	11/13/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58994.01
Sample Tag: MW-5(3)
Collected Date/Time: 11/13/2013 10:00
Matrix: Groundwater
COC Reference: 79786

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020A	12/02/13 17:35	PER	7440-38-2	
Barium	0.093	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	12/02/13 17:35	PER	7440-42-8	
Cadmium	0.0022	mg/L	0.0005	SW6020A	12/02/13 17:35	PER	7440-43-9	
Chromium	0.008	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:35	PER	7439-92-1	
Manganese	0.026	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:12	CCM	7439-97-6	
Nickel	0.024	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:35	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:35	PER	7440-62-2	
Zinc	0.031	mg/L	0.005	SW6020A	12/02/13 17:35	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	91-58-7	

Lab Sample ID: S58994.01 (continued)
Sample Tag: MW-5(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 05:21	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/27/13 05:21	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 05:21	PL	118-74-1	

Lab Sample ID: S58994.01 (continued)
Sample Tag: MW-5(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 17:36	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 17:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 17:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 17:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 17:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 17:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 17:06	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	120-82-1	

Lab Sample ID: S58994.01 (continued)
Sample Tag: MW-5(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 17:06	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58994.02
Sample Tag: MW-02 (UNK-12)
Collected Date/Time: 11/13/2013 13:05
Matrix: Groundwater
COC Reference: 79786

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 17:36	PER	7440-38-2	
Barium	0.102	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020A	12/02/13 17:36	PER	7440-42-8	
Cadmium	0.0006	mg/L	0.0005	SW6020A	12/02/13 17:36	PER	7440-43-9	
Chromium	0.007	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:36	PER	7439-92-1	
Manganese	0.133	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:14	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:36	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:36	PER	7440-62-2	
Zinc	0.027	mg/L	0.005	SW6020A	12/02/13 17:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	91-58-7	

Lab Sample ID: S58994.02 (continued)
Sample Tag: MW-02 (UNK-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 05:55	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/27/13 05:55	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 05:55	PL	118-74-1	

Lab Sample ID: S58994.02 (continued)
Sample Tag: MW-02 (UNK-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 17:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 17:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 17:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 17:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 17:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 17:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 17:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	120-82-1	

Lab Sample ID: S58994.02 (continued)
Sample Tag: MW-02 (UNK-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 17:28	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58994.03
Sample Tag: Dup-07
Collected Date/Time: 11/13/2013 00:01
Matrix: Groundwater
COC Reference: 79786

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 17:38	PER	7440-38-2	
Barium	0.105	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	12/02/13 17:38	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:38	PER	7440-43-9	
Chromium	0.005	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:38	PER	7439-92-1	
Manganese	0.137	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:16	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:38	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:38	PER	7440-62-2	
Zinc	0.025	mg/L	0.005	SW6020A	12/02/13 17:38	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	91-58-7	

Lab Sample ID: S58994.03 (continued)
Sample Tag: Dup-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 06:28	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 06:28	PL	118-74-1	

Lab Sample ID: S58994.03 (continued)
Sample Tag: Dup-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 18:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 17:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 17:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 17:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 17:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 17:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 17:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	120-82-1	

Lab Sample ID: S58994.03 (continued)
Sample Tag: Dup-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 17:50	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58994.04
Sample Tag: Trip Blank
Collected Date/Time: 11/13/2013 00:01
Matrix: Liquid
COC Reference: 79786

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:30	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 18:30	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 18:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 18:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 18:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 18:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 18:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	79-34-5	

Lab Sample ID: S58994.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 18:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 18:12	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

79786

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.0.2013.

SAMPLER(S) PLEASE PRINT/SIGN NAME: Robert Prigge

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals
58994.01	11/13/13	10:00	MW-5(3)	GW	6	X	X	X					3	2	1
.02	11/13/13	13:05	MW-02 (UNK-12)	GW	6	X	X	X					3	2	1
.03	11/13/13	--	Dup-07	GW	6	X	X	X					3	2	1
.04	--	--	Trip Blank	L	1		X						1		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/13/13	TIME 14:45
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-13	TIME 17:35
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-14-13	TIME 0930

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-13-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/14/13	TIME 900
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58944.01(01)
Generated on 12/03/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
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Brighton, MI 48116

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Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

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Report Summary

Lab Sample ID(s): S58944.01-S58944.05
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/11/2013
Submitted Date/Time: 11/12/2013 09:45
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58944.01	MW-13-24 (11112013)	Groundwater	11/11/2013 09:05
S58944.02	MW-13-22 (11112013)	Groundwater	11/11/2013 11:25
S58944.03	MW-12-21 (11112013)	Groundwater	11/11/2013 13:20
S58944.04	MW-13-28 (11112013)	Groundwater	11/11/2013 15:40
S58944.05	Trip Blank	Liquid	11/11/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58944.01
Sample Tag: MW-13-24 (11112013)
Collected Date/Time: 11/11/2013 09:05
Matrix: Groundwater
COC Reference: 79794

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/15/13 10:20	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/02/13 15:17	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 15:15	PER	7440-38-2	
Barium	0.029	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7440-39-3	
Boron	0.15	mg/L	0.04	SW6020A	12/02/13 15:15	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:15	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 15:17	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 15:15	PER	7439-92-1	
Manganese	0.340	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:40	CCM	7439-97-6	
Nickel	0.045	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:15	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 15:17	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 15:15	PER	7440-62-2	
Zinc	0.007	mg/L	0.005	SW6020A	12/02/13 15:15	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	205-99-2	

Lab Sample ID: S58944.01 (continued)
Sample Tag: MW-13-24 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 02:05	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	129-00-0	

Lab Sample ID: S58944.01 (continued)
Sample Tag: MW-13-24 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 02:05	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 18:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/14/13 19:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/14/13 19:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/14/13 19:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/14/13 19:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/14/13 19:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/14/13 19:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	100-42-5	

Lab Sample ID: S58944.01 (continued)
Sample Tag: MW-13-24 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/14/13 19:53	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58944.02
Sample Tag: MW-13-22 (11112013)
Collected Date/Time: 11/11/2013 11:25
Matrix: Groundwater
COC Reference: 79794

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/15/13 10:20	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020A	12/02/13 15:19	PER	7440-38-2	
Barium	0.039	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7440-39-3	
Boron	0.23	mg/L	0.04	SW6020A	12/02/13 15:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:19	PER	7440-43-9	
Chromium	0.006	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 15:19	PER	7439-92-1	
Manganese	0.084	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:42	CCM	7439-97-6	
Nickel	0.039	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 15:19	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	12/02/13 15:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	91-58-7	

Lab Sample ID: S58944.02 (continued)
Sample Tag: MW-13-22 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 02:39	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 02:39	PL	118-74-1	

Lab Sample ID: S58944.02 (continued)
Sample Tag: MW-13-22 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	270	ug/L	30	SW8260B - SIM	11/22/13 20:37	WAT	123-91-1	Y
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/14/13 20:15	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/14/13 20:15	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/14/13 20:15	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/14/13 20:15	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/14/13 20:15	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/14/13 20:15	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	95-50-1	

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S58944.02 (continued)
Sample Tag: MW-13-22 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/14/13 20:15	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58944.03
Sample Tag: MW-12-21 (11112013)
Collected Date/Time: 11/11/2013 13:20
Matrix: Groundwater
COC Reference: 79794

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 13:37	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/15/13 10:20	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/02/13 15:22	PER	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020A	12/02/13 15:20	PER	7440-38-2	
Barium, Dissolved	0.032	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7440-39-3	
Barium	0.150	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7440-39-3	
Boron, Dissolved	0.60	mg/L	0.04	SW6020A	12/02/13 15:22	PER	7440-42-8	
Boron	0.59	mg/L	0.04	SW6020A	12/02/13 15:20	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:22	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:20	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7440-47-3	
Chromium	0.069	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7440-48-4	
Cobalt	0.009	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7440-48-4	
Copper, Dissolved	0.005	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7440-50-8	
Copper	0.152	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 15:22	PER	7439-92-1	
Lead	0.008	mg/L	0.003	SW6020A	12/02/13 15:20	PER	7439-92-1	
Manganese, Dissolved	0.250	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7439-96-5	
Manganese	0.571	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:46	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:44	CCM	7439-97-6	
Nickel, Dissolved	0.066	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7440-02-0	
Nickel	0.087	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:22	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:20	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 15:22	PER	7440-62-2	
Vanadium	0.009	mg/L	0.004	SW6020A	12/02/13 15:20	PER	7440-62-2	
Zinc, Dissolved	0.023	mg/L	0.005	SW6020A	12/02/13 15:22	PER	7440-66-6	
Zinc	0.091	mg/L	0.005	SW6020A	12/02/13 15:20	PER	7440-66-6	

Lab Sample ID: S58944.03 (continued)
Sample Tag: MW-12-21 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 03:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	88-75-5	

Lab Sample ID: S58944.03 (continued)
Sample Tag: MW-12-21 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 03:12	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	500	ug/L	50	SW8260B - SIM	11/22/13 20:55	WAT	123-91-1	Y
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/14/13 20:37	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/14/13 20:37	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/14/13 20:37	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/14/13 20:37	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/14/13 20:37	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-27-4	

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S58944.03 (continued)
Sample Tag: MW-12-21 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/14/13 20:37	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/14/13 20:37	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58944.04
Sample Tag: MW-13-28 (11112013)
Collected Date/Time: 11/11/2013 15:40
Matrix: Groundwater
COC Reference: 79794

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/15/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/15/13 10:20	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020A	12/02/13 15:24	PER	7440-38-2	
Barium	0.115	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020A	12/02/13 15:24	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:24	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 15:24	PER	7439-92-1	
Manganese	0.009	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/15/13 15:48	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:24	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 15:24	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/02/13 15:24	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	91-58-7	

Lab Sample ID: S58944.04 (continued)
Sample Tag: MW-13-28 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 03:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	85-01-8	
Phenol	1	ug/L	1	SW8270D	11/26/13 03:46	PL	108-95-2	B
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 03:46	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S58944.04 (continued)
Sample Tag: MW-13-28 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 14:17	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	76-13-1	
Acetone	22	ug/L	10	SW8260C	11/14/13 20:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/14/13 20:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/14/13 20:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/14/13 20:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/14/13 20:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/14/13 20:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	120-82-1	

Lab Sample ID: S58944.04 (continued)
Sample Tag: MW-13-28 (11112013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/14/13 20:59	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58944.05
Sample Tag: Trip Blank
Collected Date/Time: 11/11/2013 00:01
Matrix: Liquid
COC Reference: 79794

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/15/13 10:24	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 19:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/14/13 21:20	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/14/13 21:20	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/14/13 21:20	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/14/13 21:20	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/14/13 21:20	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	79-34-5	

Lab Sample ID: S58944.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/14/13 21:20	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/14/13 21:20	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

79794

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 05 Project#: B006442.0.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 1,4 Dioxane 8260 Stn	TCL SVOCs	TAL Metals	Dissolved Lead Arsenic Vanadium	Dissolved TAL Metals						
58944.01	11/11/13	9:05	MW-13-24 (11112013)	GW	7	2	3	2					X	X	X	X							
.02	11/11/13	11:25	MW-13-22 (11112013)	GW	6	2	3	1					X	X	X								
.03	11/11/13	13:20	MW-12-21 (11112013)	GW	7	2	3	2					X	X	X		X						
.04	11/11/13	15:40	MW-13-25 (11112013)	GW	6	2	3	1					X	X	X								
.05	11-11-13	—	Trip Blank	L	1		1						X										

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/11/13	TIME 16:30
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/11/13	TIME 16:33
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-12-13	TIME 945

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-12-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/12/13	TIME 945
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58964.01(01)
Generated on 12/03/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
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East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58964.01-S58964.05
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/12/2013
Submitted Date/Time: 11/13/2013 09:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58964.01	P6-SB-35 (111213)	Groundwater	11/12/2013 09:35
S58964.02	MW-04-04(R) (111213)	Groundwater	11/12/2013 14:40
S58964.03	MW-03-06 (111213)	Groundwater	11/12/2013 15:00
S58964.04	Trip Blank	Liquid	11/12/2013 07:30
S58964.05	EQ-6	Liquid	11/12/2013 15:20

Analytical Laboratory Report

Lab Sample ID: S58964.01
Sample Tag: P6-SB-35 (111213)
Collected Date/Time: 11/12/2013 09:35
Matrix: Groundwater
COC Reference: 79796

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 10:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7440-36-0	
Arsenic, Dissolved	0.007	mg/L	0.002	SW6020A	12/02/13 15:27	PER	7440-38-2	
Arsenic	0.008	mg/L	0.002	SW6020A	12/02/13 15:25	PER	7440-38-2	
Barium	0.018	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7440-39-3	
Boron	0.17	mg/L	0.04	SW6020A	12/02/13 15:25	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:25	PER	7440-43-9	
Chromium	0.014	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7440-48-4	
Copper	0.007	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 15:27	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 15:25	PER	7439-92-1	
Manganese	0.007	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 15:39	CCM	7439-97-6	
Nickel	0.006	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:25	PER	7440-22-4	
Vanadium, Dissolved	0.020	mg/L	0.004	SW6020A	12/02/13 15:27	PER	7440-62-2	
Vanadium	0.021	mg/L	0.004	SW6020A	12/02/13 15:25	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/02/13 15:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	205-99-2	

Lab Sample ID: S58964.01 (continued)
Sample Tag: P6-SB-35 (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 04:19	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	129-00-0	

Lab Sample ID: S58964.01 (continued)
Sample Tag: P6-SB-35 (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 04:19	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 19:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 20:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 20:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 20:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 20:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 20:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 20:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	100-42-5	

Lab Sample ID: S58964.01 (continued)
Sample Tag: P6-SB-35 (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58964.02
Sample Tag: MW-04-04(R) (111213)
Collected Date/Time: 11/12/2013 14:40
Matrix: Groundwater
COC Reference: 79796

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 10:00	CCM		
Mercury Digestion	Completed			SW7471B	11/18/13 10:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7440-36-0	
Arsenic, Dissolved	0.020	mg/L	0.002	SW6020A	12/02/13 15:31	PER	7440-38-2	
Arsenic	0.021	mg/L	0.002	SW6020A	12/02/13 15:29	PER	7440-38-2	
Barium, Dissolved	0.401	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7440-39-3	
Barium	0.414	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7440-39-3	
Boron, Dissolved	0.04	mg/L	0.04	SW6020A	12/02/13 15:31	PER	7440-42-8	
Boron	0.04	mg/L	0.04	SW6020A	12/02/13 15:29	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:31	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:29	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7440-47-3	
Chromium	0.010	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7440-50-8	
Copper	0.007	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 15:31	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 15:29	PER	7439-92-1	
Manganese, Dissolved	0.021	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7439-96-5	
Manganese	0.048	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/18/13 15:43	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 15:41	CCM	7439-97-6	
Nickel, Dissolved	0.018	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7440-02-0	
Nickel	0.016	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:31	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:29	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 15:31	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 15:29	PER	7440-62-2	
Zinc, Dissolved	0.012	mg/L	0.005	SW6020A	12/02/13 15:31	PER	7440-66-6	
Zinc	0.005	mg/L	0.005	SW6020A	12/02/13 15:29	PER	7440-66-6	

Lab Sample ID: S58964.02 (continued)
Sample Tag: MW-04-04(R) (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 04:52	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	88-75-5	

Lab Sample ID: S58964.02 (continued)
Sample Tag: MW-04-04(R) (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 04:52	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 20:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 20:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 20:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 20:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 20:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 20:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	108-87-2	

Lab Sample ID: S58964.02 (continued)
Sample Tag: MW-04-04(R) (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 20:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:53	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58964.03
Sample Tag: MW-03-06 (111213)
Collected Date/Time: 11/12/2013 15:00
Matrix: Groundwater
COC Reference: 79796

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 10:00	CCM		
Mercury Digestion	Completed			SW7471B	11/18/13 10:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7440-36-0	
Arsenic, Dissolved	0.034	mg/L	0.002	SW6020A	12/02/13 15:55	PER	7440-38-2	
Arsenic	0.033	mg/L	0.002	SW6020A	12/02/13 15:53	PER	7440-38-2	
Barium, Dissolved	0.299	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7440-39-3	
Barium	0.300	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7440-39-3	
Boron, Dissolved	0.09	mg/L	0.04	SW6020A	12/02/13 15:55	PER	7440-42-8	
Boron	0.09	mg/L	0.04	SW6020A	12/02/13 15:53	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:55	PER	7440-43-9	
Cadmium	0.0014	mg/L	0.0005	SW6020A	12/02/13 15:53	PER	7440-43-9	
Chromium, Dissolved	0.006	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7440-47-3	
Chromium	0.018	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7440-50-8	
Copper	0.007	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 15:55	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 15:53	PER	7439-92-1	
Manganese, Dissolved	0.276	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7439-96-5	
Manganese	0.312	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/18/13 15:47	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 15:45	CCM	7439-97-6	
Nickel, Dissolved	0.074	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7440-02-0	
Nickel	0.078	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7440-02-0	
Selenium, Dissolved	0.017	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7782-49-2	
Selenium	0.018	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:55	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:53	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 15:55	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 15:53	PER	7440-62-2	
Zinc, Dissolved	0.012	mg/L	0.005	SW6020A	12/02/13 15:55	PER	7440-66-6	
Zinc	0.016	mg/L	0.005	SW6020A	12/02/13 15:53	PER	7440-66-6	

Lab Sample ID: S58964.03 (continued)
Sample Tag: MW-03-06 (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 05:26	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	88-75-5	

Lab Sample ID: S58964.03 (continued)
Sample Tag: MW-03-06 (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 05:26	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	9	ug/L	5	SW8260B - SIM	11/21/13 20:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 21:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 21:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 21:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	74-87-3	
Vinyl chloride	12	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 21:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 21:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	108-87-2	

Lab Sample ID: S58964.03 (continued)
Sample Tag: MW-03-06 (111213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 21:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:14	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58964.04
Sample Tag: Trip Blank
Collected Date/Time: 11/12/2013 07:30
Matrix: Liquid
COC Reference: 79796

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 20:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 21:34	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 21:34	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 21:34	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 21:34	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 21:34	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	79-34-5	

Lab Sample ID: S58964.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 21:34	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:34	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58964.05
Sample Tag: EQ-6
Collected Date/Time: 11/12/2013 15:20
Matrix: Liquid
COC Reference: 79796

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/02/13 15:50	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 15:48	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/02/13 15:48	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:48	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 15:50	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 15:48	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:02	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:48	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 15:50	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 15:48	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/02/13 15:48	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	205-99-2	

Lab Sample ID: S58964.05 (continued)
Sample Tag: EQ-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 05:59	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	3	ug/L	1	SW8270D	11/26/13 05:59	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	108-95-2	

B-Compound also found in associated method blank

Lab Sample ID: S58964.05 (continued)
Sample Tag: EQ-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 05:59	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 20:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 21:56	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 21:56	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 21:56	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 21:56	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 21:56	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 21:56	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	95-47-6	

Lab Sample ID: S58964.05 (continued)
Sample Tag: EQ-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:56	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

79796

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 6 Project#: B006446.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stellhorn

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☒ Detroit ME ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1,4 dioxane, 8260 SIM	TCL SVOCs	TAL metals	Diss Hg, Cr(6), Vanadium	Diss metals
58964.01	11/12	0935	PG-SB-35 (11 12 13)	GW	7	2	3	2					X	X	X	X	
.02	11/12	1440	MW-04-04 (R) (11 12 13)	GW	7	2	3	2					X	X	X		X
.03	11/12	1560	MW-03-06 (11 12 13)	GW	7	2	3	2					X	X	X		X
.04	11/12	0730	TRIP BLANK	L	1		1										
.05	11/12	1520	EQ-6	L	7	2	3	2					X	X	X	X	

SS

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/12/13	TIME 1600
RECEIVED BY: SIGNATURE/ORGANIZATION Ryan Stevenson		DATE 11/12/13	TIME 1600
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION MB		DATE 11-13-13	TIME 840

RELINQUISHED BY: SIGNATURE/ORGANIZATION Kevin George MEM		DATE 11-13-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Kevin George		DATE 11/13/13	TIME 930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.5
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58965.01(01)
Generated on 12/03/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58965.01-S58965.05
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/12/2013
Submitted Date/Time: 11/13/2013 09:30
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58965.01	MWBP 10UST 1-4 (11-12)	Groundwater	11/12/2013 11:00
S58965.02	UNK-03 (11-12)	Groundwater	11/12/2013 14:00
S58965.03	B-BP-16 (11-12)	Groundwater	11/12/2013 15:00
S58965.04	MWBP 12UST 1-4 (11-12)	Groundwater	11/12/2013 15:45
S58965.05	Trip Blank	Groundwater	11/12/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S58965.01
Sample Tag: MWBP 10UST 1-4 (11-12)
Collected Date/Time: 11/12/2013 11:00
Matrix: Groundwater
COC Reference: 79784

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
3	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7440-36-0	
Arsenic, Dissolved	0.055	mg/L	0.002	SW6020A	12/02/13 15:58	PER	7440-38-2	
Arsenic	0.055	mg/L	0.002	SW6020A	12/02/13 15:57	PER	7440-38-2	
Barium, Dissolved	0.080	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7440-39-3	
Barium	0.084	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020A	12/02/13 15:58	PER	7440-42-8	
Boron	0.12	mg/L	0.04	SW6020A	12/02/13 15:57	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:58	PER	7440-43-9	
Cadmium	0.0008	mg/L	0.0005	SW6020A	12/02/13 15:57	PER	7440-43-9	
Chromium, Dissolved	0.014	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7440-47-3	
Chromium	0.015	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 15:58	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 15:57	PER	7439-92-1	
Manganese, Dissolved	0.082	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7439-96-5	
Manganese	0.082	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:06	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:04	CCM	7439-97-6	
Nickel, Dissolved	0.006	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7440-02-0	
Nickel	0.006	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:58	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 15:57	PER	7440-22-4	
Vanadium, Dissolved	0.063	mg/L	0.004	SW6020A	12/02/13 15:58	PER	7440-62-2	
Vanadium	0.070	mg/L	0.004	SW6020A	12/02/13 15:57	PER	7440-62-2	
Zinc, Dissolved	0.011	mg/L	0.005	SW6020A	12/02/13 15:58	PER	7440-66-6	
Zinc	0.022	mg/L	0.005	SW6020A	12/02/13 15:57	PER	7440-66-6	

Lab Sample ID: S58965.01 (continued)
Sample Tag: MWBP 10UST 1-4 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 06:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270D	11/26/13 06:33	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S58965.01 (continued)
Sample Tag: MWBP 10UST 1-4 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 06:33	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 21:15	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 22:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 22:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 22:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 22:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 22:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-27-4	

Lab Sample ID: S58965.01 (continued)
Sample Tag: MWBP 10UST 1-4 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	3	ug/L	1	SW8260C	11/20/13 22:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 22:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 22:59	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58965.02
Sample Tag: UNK-03 (11-12)
Collected Date/Time: 11/12/2013 14:00
Matrix: Groundwater
COC Reference: 79784

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020A	12/02/13 16:02	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	12/02/13 16:00	PER	7440-38-2	
Barium	0.043	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020A	12/02/13 16:00	PER	7440-42-8	
Cadmium	0.0017	mg/L	0.0005	SW6020A	12/02/13 16:00	PER	7440-43-9	
Chromium	0.006	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7440-48-4	
Copper	0.005	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 16:02	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 16:00	PER	7439-92-1	
Manganese	0.582	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:08	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:00	PER	7440-22-4	
Vanadium, Dissolved	0.005	mg/L	0.004	SW6020A	12/02/13 16:02	PER	7440-62-2	
Vanadium	0.005	mg/L	0.004	SW6020A	12/02/13 16:00	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	12/02/13 16:00	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	205-99-2	

Lab Sample ID: S58965.02 (continued)
Sample Tag: UNK-03 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 07:06	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	129-00-0	

Lab Sample ID: S58965.02 (continued)
Sample Tag: UNK-03 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 07:06	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 21:33	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 22:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 22:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 22:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 22:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 22:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 22:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	100-42-5	

Lab Sample ID: S58965.02 (continued)
Sample Tag: UNK-03 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 22:17	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58965.03
Sample Tag: B-BP-16 (11-12)
Collected Date/Time: 11/12/2013 15:00
Matrix: Groundwater
COC Reference: 79784

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020A	12/02/13 16:04	PER	7440-38-2	
Barium	0.243	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020A	12/02/13 16:04	PER	7440-42-8	
Cadmium	0.0014	mg/L	0.0005	SW6020A	12/02/13 16:04	PER	7440-43-9	
Chromium	0.014	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7440-48-4	
Copper	0.006	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 16:04	PER	7439-92-1	
Manganese	0.302	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:10	CCM	7439-97-6	
Nickel	0.016	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:04	PER	7440-22-4	
Vanadium	0.009	mg/L	0.004	SW6020A	12/02/13 16:04	PER	7440-62-2	
Zinc	0.026	mg/L	0.005	SW6020A	12/02/13 16:04	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	91-58-7	

Lab Sample ID: S58965.03 (continued)
Sample Tag: B-BP-16 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 07:40	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 07:40	PL	118-74-1	

Lab Sample ID: S58965.03 (continued)
Sample Tag: B-BP-16 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 21:52	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 23:20	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 23:20	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 23:20	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	71-55-6	
Cyclohexane	7	ug/L	1	SW8260C	11/20/13 23:20	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 23:20	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 23:20	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	56-23-5	
Benzene	2	ug/L	1	SW8260C	11/20/13 23:20	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-27-4	
Methyl cyclohexane	6	ug/L	1	SW8260C	11/20/13 23:20	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 23:20	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	100-42-5	
Isopropylbenzene	7	ug/L	1	SW8260C	11/20/13 23:20	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	120-82-1	

Lab Sample ID: S58965.03 (continued)
Sample Tag: B-BP-16 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 23:20	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58965.04
Sample Tag: MWBP 12UST 1-4 (11-12)
Collected Date/Time: 11/12/2013 15:45
Matrix: Groundwater
COC Reference: 79784

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7440-36-0	
Arsenic	0.016	mg/L	0.002	SW6020A	12/02/13 16:05	PER	7440-38-2	
Barium	0.143	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020A	12/02/13 16:05	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:05	PER	7440-43-9	
Chromium	0.011	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 16:05	PER	7439-92-1	
Manganese	0.124	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:12	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7440-02-0	
Selenium	0.008	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:05	PER	7440-22-4	
Vanadium	0.011	mg/L	0.004	SW6020A	12/02/13 16:05	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/02/13 16:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	91-58-7	

Lab Sample ID: S58965.04 (continued)
Sample Tag: MWBP 12UST 1-4 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 08:13	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 08:13	PL	118-74-1	

Lab Sample ID: S58965.04 (continued)
Sample Tag: MWBP 12UST 1-4 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 22:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 23:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 23:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 23:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	71-55-6	
Cyclohexane	1	ug/L	1	SW8260C	11/20/13 23:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 23:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 23:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	56-23-5	
Benzene	9	ug/L	1	SW8260C	11/20/13 23:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 23:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	120-82-1	

Lab Sample ID: S58965.04 (continued)
Sample Tag: MWBP 12UST 1-4 (11-12)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 23:41	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58965.05
Sample Tag: Trip Blank
Collected Date/Time: 11/12/2013 07:00
Matrix: Groundwater
COC Reference: 79784

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:19	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 22:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 22:38	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 22:38	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 22:38	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 22:38	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 22:38	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	79-34-5	

Lab Sample ID: S58965.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 22:38	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 22:38	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

79784

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☑ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 6 Project#: B00644 .2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 01 L4 SIM	TAL Metal	Diss TAL Metal	Diss As Arsenic Uranium	SVOCs
58965.01	11-12	11:00	MWBP 10UST 1-4 (11-12)	GW	8	2	3	3					X	X	X	X	X
.02	11-12	14:00	UNK-03 (11-12)	GW	7	2	3	2					X	X		X	X
.03	11-12	15:00	BBP-16 (11-12)	GW	6	2	3	1					X	X			X
.04	11-12	15:45	MWBP 12UST 1-4 (11-12)	GW	6	2	3	1					X	X			X
.05	11-12	7:00	Trip Blank	GW	1	0	1										

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE 11-12	TIME 17:30
RECEIVED BY: SIGNATURE/ORGANIZATION	PME Storage	DATE 11-12	TIME 17:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PME Storage	DATE 11-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Mer	DATE 11-13-12	TIME 940

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Mer	DATE 11-13-12	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kim George	DATE 11/13/12	TIME 930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.5
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58966.01(01)
Generated on 12/03/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58966.01-S58966.04
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/12/2013
Submitted Date/Time: 11/13/2013 09:30
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58966.01	Trip Blank (11122013)	Liquid	11/12/2013 00:01
S58966.02	MW-02-02(3) (11122013)	Groundwater	11/12/2013 10:15
S58966.03	P3-SB-07 (11122013)	Groundwater	11/12/2013 13:30
S58966.04	MW-91-2 (11122013)	Groundwater	11/12/2013 16:10

Analytical Laboratory Report

Lab Sample ID: S58966.01
Sample Tag: Trip Blank (11122013)
Collected Date/Time: 11/12/2013 00:01
Matrix: Liquid
COC Reference: 77079

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 22:47	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 19:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 19:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 19:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 19:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 19:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	79-34-5	

Lab Sample ID: S58966.01 (continued)
Sample Tag: Trip Blank (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 19:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58966.02
Sample Tag: MW-02-02(3) (11122013)
Collected Date/Time: 11/12/2013 10:15
Matrix: Groundwater
COC Reference: 77079

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR
1	125ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	SM3500-Cr B	11/13/13 10:05	JKB	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7440-36-0	
Arsenic, Dissolved	0.009	mg/L	0.002	SW6020A	12/02/13 16:46	PER	7440-38-2	
Arsenic	0.009	mg/L	0.002	SW6020A	12/02/13 16:43	PER	7440-38-2	
Barium	0.096	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/02/13 16:43	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:43	PER	7440-43-9	
Chromium	0.009	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7440-47-3	
Cobalt	0.008	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 16:46	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 16:43	PER	7439-92-1	
Manganese	1.10	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:14	CCM	7439-97-6	
Nickel	0.045	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:43	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 16:46	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 16:43	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020A	12/02/13 16:43	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	84-74-2	

Lab Sample ID: S58966.02 (continued)
Sample Tag: MW-02-02(3) (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 08:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	117-84-0	

Lab Sample ID: S58966.02 (continued)
Sample Tag: MW-02-02(3) (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 08:47	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 23:05	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 19:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 19:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 19:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 19:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 19:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	79-34-5	

Lab Sample ID: S58966.02 (continued)
Sample Tag: MW-02-02(3) (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 19:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:29	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58966.03
Sample Tag: P3-SB-07 (11122013)
Collected Date/Time: 11/12/2013 13:30
Matrix: Groundwater
COC Reference: 77079

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR
1	125ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/18/13 17:01	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	SM3500-Cr B	11/13/13 10:15	JKB	18540-29-9	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/02/13 16:50	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 16:48	PER	7440-38-2	
Barium, Dissolved	0.058	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7440-39-3	
Barium	0.061	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7440-39-3	
Boron, Dissolved	1.09	mg/L	0.04	SW6020A	12/02/13 16:50	PER	7440-42-8	
Boron	1.08	mg/L	0.04	SW6020A	12/02/13 16:48	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:50	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:48	PER	7440-43-9	
Chromium, Dissolved	0.006	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7440-47-3	
Chromium	0.007	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 16:50	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 16:48	PER	7439-92-1	
Manganese, Dissolved	0.066	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7439-96-5	
Manganese	0.097	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:18	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:16	CCM	7439-97-6	
Nickel, Dissolved	0.015	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7440-02-0	
Nickel	0.017	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:50	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:48	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 16:50	PER	7440-62-2	

Lab Sample ID: S58966.03 (continued)
Sample Tag: P3-SB-07 (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 16:48	PER	7440-62-2	
Zinc, Dissolved	0.014	mg/L	0.005	SW6020A	12/02/13 16:50	PER	7440-66-6	
Zinc	0.016	mg/L	0.005	SW6020A	12/02/13 16:48	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 09:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	78-59-1	

Lab Sample ID: S58966.03 (continued)
Sample Tag: P3-SB-07 (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 09:20	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 23:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 19:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 19:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 19:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 19:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 19:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	71-43-2	

Lab Sample ID: S58966.03 (continued)
Sample Tag: P3-SB-07 (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 19:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 19:49	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58966.04
Sample Tag: MW-91-2 (11122013)
Collected Date/Time: 11/12/2013 16:10
Matrix: Groundwater
COC Reference: 77079

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR
1	125ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/21/13 10:14	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	SM3500-Cr B	11/13/13 10:25	JKB	18540-29-9	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7440-36-0	
Arsenic, Dissolved	0.008	mg/L	0.002	SW6020A	12/02/13 16:53	PER	7440-38-2	
Arsenic	0.009	mg/L	0.002	SW6020A	12/02/13 16:51	PER	7440-38-2	
Barium, Dissolved	0.109	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7440-39-3	
Barium	0.112	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020A	12/02/13 16:53	PER	7440-42-8	
Boron	0.08	mg/L	0.04	SW6020A	12/02/13 16:51	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:53	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:51	PER	7440-43-9	
Chromium, Dissolved	0.009	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7440-47-3	
Chromium	0.058	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7440-50-8	
Copper	0.008	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 16:53	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 16:51	PER	7439-92-1	
Manganese, Dissolved	0.049	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7439-96-5	
Manganese	0.052	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:24	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:34	CCM	7439-97-6	
Nickel, Dissolved	0.016	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7440-02-0	
Nickel	0.015	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7782-49-2	
Selenium	0.007	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:53	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:51	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 16:53	PER	7440-62-2	

Lab Sample ID: S58966.04 (continued)
Sample Tag: MW-91-2 (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 16:51	PER	7440-62-2	
Zinc, Dissolved	0.009	mg/L	0.005	SW6020A	12/02/13 16:53	PER	7440-66-6	
Zinc	0.006	mg/L	0.005	SW6020A	12/02/13 16:51	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 14:11	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	78-59-1	

Lab Sample ID: S58966.04 (continued)
Sample Tag: MW-91-2 (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 14:11	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/21/13 23:41	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 20:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 20:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 20:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 20:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 20:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	71-43-2	

Lab Sample ID: S58966.04 (continued)
Sample Tag: MW-91-2 (11122013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 20:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:09	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

77079

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006446 c.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 624 + 1,4 Dioxane SIM	TCL SVOCs	TAL Metals	Dissolved Arsenic Lead Vanadium	Hexavalent Chromium	Dissolved TAL Metals
58966.01	—	—	Trip Blank (11122013)	L	1		X						X					
.02	11/12/13	10:15	MW-02-02(3) (11122013)	GW	8	3	3	2					X	X	X	X	X	
.03	11/12/13	13:30	P3-SB-07 (11122013)	GW	8	3	3	2					X	X	X		X	X
.04	11/12/13	16:10	MW-91-2 (11122013)	GW	8	3	3	2					X	X	X		X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS ☒ Sampler	DATE 11-12-13	TIME 17.15
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11.12	TIME 17:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Meri 11-13-13	DATE	TIME 8:40

RELINQUISHED BY: SIGNATURE/ORGANIZATION	MERI	DATE 11-13-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/13/13	TIME 930
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.5
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58967.01(01)
Generated on 12/03/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58967.01-S58967.04
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/12/2013
Submitted Date/Time: 11/13/2013 09:30
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58967.01	MW-13-30	Groundwater	11/12/2013 11:58
S58967.02	MW-13-23	Groundwater	11/12/2013 13:48
S58967.03	MW-91-3	Groundwater	11/12/2013 16:18
S58967.04	Trip Blank	Liquid	11/12/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S58967.01
Sample Tag: MW-13-30
Collected Date/Time: 11/12/2013 11:58
Matrix: Groundwater
COC Reference: 77097

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:27	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/02/13 16:56	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 16:55	PER	7440-38-2	
Barium, Dissolved	0.046	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7440-39-3	
Barium	0.051	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7440-39-3	
Boron, Dissolved	0.19	mg/L	0.04	SW6020A	12/02/13 16:56	PER	7440-42-8	
Boron	0.21	mg/L	0.04	SW6020A	12/02/13 16:55	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:56	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:55	PER	7440-43-9	
Chromium, Dissolved	0.012	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7440-47-3	
Chromium	0.011	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/02/13 16:56	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 16:55	PER	7439-92-1	
Manganese, Dissolved	0.384	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7439-96-5	
Manganese	0.407	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:38	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:36	CCM	7439-97-6	
Nickel, Dissolved	0.020	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7440-02-0	
Nickel	0.021	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:56	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:55	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/02/13 16:56	PER	7440-62-2	
Vanadium	0.004	mg/L	0.004	SW6020A	12/02/13 16:55	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/02/13 16:56	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020A	12/02/13 16:55	PER	7440-66-6	

Lab Sample ID: S58967.01 (continued)
Sample Tag: MW-13-30

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 14:45	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/26/13 14:45	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	88-75-5	

Lab Sample ID: S58967.01 (continued)
Sample Tag: MW-13-30

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 14:45	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 14:35	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 14:54	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 14:54	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 14:54	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 14:54	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 14:54	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	108-87-2	

Lab Sample ID: S58967.01 (continued)
Sample Tag: MW-13-30

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 14:54	WAT		
o-Xylene	1	ug/L	1	SW8260C	11/22/13 14:54	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 14:54	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58967.02
Sample Tag: MW-13-23
Collected Date/Time: 11/12/2013 13:48
Matrix: Groundwater
COC Reference: 77097

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 16:58	PER	7440-38-2	
Barium	0.018	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7440-39-3	
Boron	0.24	mg/L	0.04	SW6020A	12/02/13 16:58	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:58	PER	7440-43-9	
Chromium	0.007	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7440-47-3	
Cobalt	0.006	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 16:58	PER	7439-92-1	
Manganese	1.76	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:40	CCM	7439-97-6	
Nickel	0.050	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 16:58	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 16:58	PER	7440-62-2	
Zinc	0.017	mg/L	0.005	SW6020A	12/02/13 16:58	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	91-58-7	

Lab Sample ID: S58967.02 (continued)
Sample Tag: MW-13-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 15:19	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/26/13 15:19	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 15:19	PL	118-74-1	

Lab Sample ID: S58967.02 (continued)
Sample Tag: MW-13-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 14:53	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 20:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 20:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 20:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 20:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 20:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 20:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	120-82-1	

Lab Sample ID: S58967.02 (continued)
Sample Tag: MW-13-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 20:49	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58967.03
Sample Tag: MW-91-3
Collected Date/Time: 11/12/2013 16:18
Matrix: Groundwater
COC Reference: 77097

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 12:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/02/13 17:00	PER	7440-38-2	
Barium	0.023	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7440-39-3	
Boron	0.20	mg/L	0.04	SW6020A	12/02/13 17:00	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:00	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:00	PER	7439-92-1	
Manganese	0.015	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 16:42	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:00	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:00	PER	7440-62-2	
Zinc	0.025	mg/L	0.005	SW6020A	12/02/13 17:00	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	91-58-7	

Lab Sample ID: S58967.03 (continued)
Sample Tag: MW-91-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/26/13 15:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/26/13 15:53	PL	118-74-1	

Lab Sample ID: S58967.03 (continued)
Sample Tag: MW-91-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 15:11	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 21:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 21:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 21:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 21:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 21:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 21:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	120-82-1	

Lab Sample ID: S58967.03 (continued)
Sample Tag: MW-91-3

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58967.04
Sample Tag: Trip Blank
Collected Date/Time: 11/12/2013 00:01
Matrix: Liquid
COC Reference: 77097

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/22/13 13:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 15:29	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/20/13 21:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/20/13 21:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/20/13 21:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/20/13 21:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/20/13 21:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	79-34-5	

Lab Sample ID: S58967.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/20/13 21:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/20/13 21:30	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77097

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B00644 SC 2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL metals	TAL Dissolved Metals
58967.01	11/12/13	11:58	MW-13-30	GW	7	X	X	X					3	2	1	1
.02	11/12/13	13:48	MW-13-23	GW	6	X	X	X					3	2	1	
.03	11/12/13	16:18	MW-91-3	GW	6	X	X	X					3	2	1	
.04	--	--	Trip Blank	L	1		X						1			

Ref

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ARCADIS (Sampler) DATE 11/12/13 TIME 17:05
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE TIME 11-12 17:05

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Mori DATE 11-13-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Kevin George DATE 11/13/13 TIME 930

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Merit DATE 11-13-13 TIME 840

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S58995.01(01)
Generated on 12/06/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
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Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58995.01-S58995.06
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/13/2013
Submitted Date/Time: 11/14/2013 09:00
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58995.01	MW-03(2) (11-13)	Groundwater	11/13/2013 08:30
S58995.02	MWBP-12A UST 1-4 (11-3)	Groundwater	11/13/2013 11:00
S58995.03	MWBP-13A UST 1-4 (11-3)	Groundwater	11/13/2013 13:00
S58995.04	MWBP-11 UST 1-4 (11-3)	Groundwater	11/13/2013 15:00
S58995.05	MWBP-10A UST 1-4 (11-3)	Groundwater	11/13/2013 16:45
S58995.06	Trip Blank	Groundwater	11/13/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S58995.01
Sample Tag: MW-03(2) (11-13)
Collected Date/Time: 11/13/2013 08:30
Matrix: Groundwater
COC Reference: 79797

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:31	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020A	12/02/13 17:40	PER	7440-38-2	
Barium	0.452	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7440-39-3	
Boron	0.16	mg/L	0.04	SW6020A	12/02/13 17:40	PER	7440-42-8	
Cadmium	0.0006	mg/L	0.0005	SW6020A	12/02/13 17:40	PER	7440-43-9	
Chromium	0.010	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7440-47-3	
Cobalt	0.005	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7440-48-4	
Copper	0.006	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:40	PER	7439-92-1	
Manganese	1.25	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:18	CCM	7439-97-6	
Nickel	0.058	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7440-02-0	
Selenium	0.010	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7782-49-2	
Silver	0.0005	mg/L	0.0005	SW6020A	12/02/13 17:40	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:40	PER	7440-62-2	
Zinc	0.009	mg/L	0.005	SW6020A	12/02/13 17:40	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	91-58-7	

Lab Sample ID: S58995.01 (continued)
Sample Tag: MW-03(2) (11-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 07:02	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 07:02	PL	118-74-1	

Lab Sample ID: S58995.01 (continued)
Sample Tag: MW-03(2) (11-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 18:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/21/13 14:45	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/21/13 14:45	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	2	ug/L	1	SW8260C	11/21/13 14:45	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/21/13 14:45	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/21/13 14:45	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/21/13 14:45	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/21/13 14:45	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	120-82-1	

Lab Sample ID: S58995.01 (continued)
Sample Tag: MW-03(2) (11-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/21/13 14:45	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58995.02
Sample Tag: MWBP-12A UST 1-4 (11-3)
Collected Date/Time: 11/13/2013 11:00
Matrix: Groundwater
COC Reference: 79797

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:31	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020A	12/02/13 17:41	PER	7440-38-2	
Barium	0.317	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	12/02/13 17:41	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:41	PER	7440-43-9	
Chromium	0.008	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:41	PER	7439-92-1	
Manganese	0.396	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:20	CCM	7439-97-6	
Nickel	0.031	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:41	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:41	PER	7440-62-2	
Zinc	0.091	mg/L	0.005	SW6020A	12/02/13 17:41	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	91-58-7	

Lab Sample ID: S58995.02 (continued)
Sample Tag: MWBP-12A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 07:36	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 07:36	PL	118-74-1	

Lab Sample ID: S58995.02 (continued)
Sample Tag: MWBP-12A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 19:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/21/13 15:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/21/13 15:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/21/13 15:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/21/13 15:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/21/13 15:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/21/13 15:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	120-82-1	

Lab Sample ID: S58995.02 (continued)
Sample Tag: MWBP-12A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/21/13 15:07	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58995.03
Sample Tag: MWBP-13A UST 1-4 (11-3)
Collected Date/Time: 11/13/2013 13:00
Matrix: Groundwater
COC Reference: 79797

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/02/13 12:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:31	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7440-36-0	
Arsenic	0.014	mg/L	0.002	SW6020A	12/02/13 17:43	PER	7440-38-2	
Barium	0.253	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/02/13 17:43	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:43	PER	7440-43-9	
Chromium	0.011	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/02/13 17:43	PER	7439-92-1	
Manganese	0.705	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:22	CCM	7439-97-6	
Nickel	0.043	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/02/13 17:43	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/02/13 17:43	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	12/02/13 17:43	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	91-58-7	

Lab Sample ID: S58995.03 (continued)
Sample Tag: MWBP-13A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 08:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 08:09	PL	118-74-1	

Lab Sample ID: S58995.03 (continued)
Sample Tag: MWBP-13A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 19:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/21/13 15:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/21/13 15:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/21/13 15:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/21/13 15:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/21/13 15:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/21/13 15:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	120-82-1	

Lab Sample ID: S58995.03 (continued)
Sample Tag: MWBP-13A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/21/13 15:29	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58995.04
Sample Tag: MWBP-11 UST 1-4 (11-3)
Collected Date/Time: 11/13/2013 15:00
Matrix: Groundwater
COC Reference: 79797

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
3	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:31	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7440-36-0	
Arsenic, Dissolved	0.029	mg/L	0.002	SW6020A	12/04/13 14:00	PER	7440-38-2	
Arsenic	0.028	mg/L	0.002	SW6020A	12/04/13 13:57	PER	7440-38-2	
Barium, Dissolved	0.012	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7440-39-3	
Barium	0.017	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7440-39-3	
Boron, Dissolved	0.09	mg/L	0.04	SW6020A	12/04/13 14:00	PER	7440-42-8	
Boron	0.10	mg/L	0.04	SW6020A	12/04/13 13:57	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:00	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 13:57	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7440-50-8	
Copper	0.014	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 14:00	PER	7439-92-1	
Lead	0.004	mg/L	0.003	SW6020A	12/04/13 13:57	PER	7439-92-1	
Manganese, Dissolved	0.006	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7439-96-5	
Manganese	0.025	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:36	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:34	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7440-02-0	
Nickel	0.005	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:00	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 13:57	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 14:00	PER	7440-62-2	
Vanadium	0.004	mg/L	0.004	SW6020A	12/04/13 13:57	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:00	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 13:57	PER	7440-66-6	

Lab Sample ID: S58995.04 (continued)
Sample Tag: MWBP-11 UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 08:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270D	11/27/13 08:43	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S58995.04 (continued)
Sample Tag: MWBP-11 UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 08:43	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 19:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/21/13 15:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/21/13 15:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/21/13 15:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/21/13 15:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/21/13 15:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-27-4	

Lab Sample ID: S58995.04 (continued)
Sample Tag: MWBP-11 UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/21/13 15:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/21/13 15:51	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58995.05
Sample Tag: MWBP-10A UST 1-4 (11-3)
Collected Date/Time: 11/13/2013 16:45
Matrix: Groundwater
COC Reference: 79797

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
3	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Mercury Digestion	Completed			SW7471B	11/18/13 14:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:31	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7440-36-0	
Arsenic, Dissolved	0.025	mg/L	0.002	SW6020A	12/04/13 14:04	PER	7440-38-2	
Arsenic	0.026	mg/L	0.002	SW6020A	12/04/13 14:02	PER	7440-38-2	
Barium, Dissolved	0.009	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7440-39-3	
Barium	0.017	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7440-39-3	
Boron, Dissolved	0.10	mg/L	0.04	SW6020A	12/04/13 14:04	PER	7440-42-8	
Boron	0.09	mg/L	0.04	SW6020A	12/04/13 14:02	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:04	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:02	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 14:04	PER	7439-92-1	
Lead	0.007	mg/L	0.003	SW6020A	12/04/13 14:02	PER	7439-92-1	
Manganese, Dissolved	0.012	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7439-96-5	
Manganese	0.025	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:40	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/18/13 17:38	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7440-02-0	
Nickel	Not detected	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:04	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:02	PER	7440-22-4	
Vanadium, Dissolved	0.030	mg/L	0.004	SW6020A	12/04/13 14:04	PER	7440-62-2	
Vanadium	0.033	mg/L	0.004	SW6020A	12/04/13 14:02	PER	7440-62-2	
Zinc, Dissolved	0.010	mg/L	0.005	SW6020A	12/04/13 14:04	PER	7440-66-6	
Zinc	0.036	mg/L	0.005	SW6020A	12/04/13 14:02	PER	7440-66-6	

Lab Sample ID: S58995.05 (continued)
Sample Tag: MWBP-10A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 09:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	88-75-5	

Lab Sample ID: S58995.05 (continued)
Sample Tag: MWBP-10A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 09:16	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 20:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/21/13 16:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/21/13 16:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/21/13 16:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/21/13 16:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/21/13 16:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-27-4	
Methyl cyclohexane	43	ug/L	1	SW8260C	11/21/13 16:13	WAT	108-87-2	

Lab Sample ID: S58995.05 (continued)
Sample Tag: MWBP-10A UST 1-4 (11-3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	79-34-5	
Ethylbenzene	3	ug/L	1	SW8260C	11/21/13 16:13	WAT	100-41-4	
p,m-Xylene	4	ug/L	2	SW8260C	11/21/13 16:13	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	100-42-5	
Isopropylbenzene	1	ug/L	1	SW8260C	11/21/13 16:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/21/13 16:13	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58995.06
Sample Tag: Trip Blank
Collected Date/Time: 11/13/2013 07:00
Matrix: Groundwater
COC Reference: 79797

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/22/13 10:31	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/22/13 20:19	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/21/13 16:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/21/13 16:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/21/13 16:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/21/13 16:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/21/13 16:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	79-34-5	

Lab Sample ID: S58995.06 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/21/13 16:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/21/13 16:35	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

79797

CHAIN OF CUSTODY RECORD

REPORT TO

Randy Christensen
ARCADIS
10559 Citation Drive Suite 100
Brighton MI 48116
810-225-1910
randy.christensen@arcadis-us.com

CONTACT NAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. FAX P.O. NO.
E-MAIL ADDRESS Lansing Plant Project#: B00644 .2013. QUOTE NO.

INVOICE TO

CONTACT NAME ARCADIS ☑ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME Kacer 2/6
SAMPLER(S) - PLEASE PRINT/SIGN NAME Cliff Wolfe

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 01 1-45m	TAL Metals	SVOCs	Diss TAL metals	Diss Cr, Hexane, Vanadium
58995.01	11-13	8:30	MW-03(2)(11-B)	GW	6	2	3	1					X	X	X		
.02	11-13	11:00	MWBP-12AUST-1-4 (11-13)	GW	6	2	3	1					X	X	X		
.03	11-13	13:00	MWBP-13A-UST 1-4 (11-13)	GW	6	2	3	1					X	X	X		
.04	11-13	15:00	MWBP-11 UST 1-4 (11-13)	GW	8	2	3	3					X	X	X	X	X
.05	11-13	16:45	MWBP-10AUST-1-4 (11-13)	GW	8	2	3	3					X	X	Y	X	Y
.06	11-13	7:00	TRIP BLANK	GW	1		1						X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE 11-13	TIME 18:00
RECEIVED BY: SIGNATURE/ORGANIZATION	ME Stanton	DATE 11-13	TIME 18:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	ME Stanton	DATE 11-14	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11-14-13	TIME 0930

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59014.01(01)
Generated on 12/06/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

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Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59014.01-S59014.05
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/14/2013
Submitted Date/Time: 11/15/2013 10:50
Sampled by: Robert Prigge
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59014.01	MW-01(3)	Groundwater	11/14/2013 09:05
S59014.02	UNK-11	Groundwater	11/14/2013 11:10
S59014.03	MW-23	Groundwater	11/14/2013 14:05
S59014.04	Equipment Blank-8	Liquid	11/14/2013 09:55
S59014.05	Trip Blank	Liquid	11/14/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S59014.01
Sample Tag: MW-01(3)
Collected Date/Time: 11/14/2013 09:05
Matrix: Groundwater
COC Reference: 77096

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020A	12/04/13 14:14	PER	7440-38-2	
Barium	0.099	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/04/13 14:14	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:14	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:14	PER	7439-92-1	
Manganese	0.133	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 14:59	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:14	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:14	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020A	12/04/13 14:14	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	91-58-7	

Lab Sample ID: S59014.01 (continued)
Sample Tag: MW-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 02:34	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/27/13 02:34	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 02:34	PL	118-74-1	

Lab Sample ID: S59014.01 (continued)
Sample Tag: MW-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 17:17	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 17:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 17:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 17:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 17:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 17:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 17:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	120-82-1	

Lab Sample ID: S59014.01 (continued)
Sample Tag: MW-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 17:53	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59014.02
Sample Tag: UNK-11
Collected Date/Time: 11/14/2013 11:10
Matrix: Groundwater
COC Reference: 77096

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
2	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7440-36-0	
Arsenic, Dissolved	0.012	mg/L	0.002	SW6020A	12/04/13 14:33	PER	7440-38-2	
Arsenic	0.012	mg/L	0.002	SW6020A	12/04/13 14:31	PER	7440-38-2	
Barium	0.102	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020A	12/04/13 14:31	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:31	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 14:33	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:31	PER	7439-92-1	
Manganese	0.208	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:01	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:31	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 14:33	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:31	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 14:31	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	205-99-2	

Lab Sample ID: S59014.02 (continued)
Sample Tag: UNK-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 03:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/27/13 03:07	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	129-00-0	

Lab Sample ID: S59014.02 (continued)
Sample Tag: UNK-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 03:07	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 17:35	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 18:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 18:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 18:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 18:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 18:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 18:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	100-42-5	

Lab Sample ID: S59014.02 (continued)
Sample Tag: UNK-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 18:14	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59014.03
Sample Tag: MW-23
Collected Date/Time: 11/14/2013 14:05
Matrix: Groundwater
COC Reference: 77096

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020A	12/04/13 14:35	PER	7440-38-2	
Barium	0.087	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/04/13 14:35	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:35	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:35	PER	7439-92-1	
Manganese	0.056	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:05	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:35	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:35	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 14:35	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	91-58-7	

Lab Sample ID: S59014.03 (continued)
Sample Tag: MW-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 03:41	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270D	11/27/13 03:41	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 03:41	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S59014.03 (continued)
Sample Tag: MW-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 17:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 18:34	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 18:34	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 18:34	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 18:34	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 18:34	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 18:34	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	120-82-1	

Lab Sample ID: S59014.03 (continued)
Sample Tag: MW-23

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 18:34	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59014.04
Sample Tag: Equipment Blank-8
Collected Date/Time: 11/14/2013 09:55
Matrix: Liquid
COC Reference: 77096

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/04/13 14:26	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/04/13 14:26	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:26	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:26	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:03	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:26	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:26	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 14:26	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	91-58-7	

Lab Sample ID: S59014.04 (continued)
Sample Tag: Equipment Blank-8

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 04:14	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 04:14	PL	118-74-1	

Lab Sample ID: S59014.04 (continued)
Sample Tag: Equipment Blank-8

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 18:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 18:54	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 18:54	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 18:54	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 18:54	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 18:54	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 18:54	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	120-82-1	

Lab Sample ID: S59014.04 (continued)
Sample Tag: Equipment Blank-8

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 18:54	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59014.05
Sample Tag: Trip Blank
Collected Date/Time: 11/14/2013 00:01
Matrix: Liquid
COC Reference: 77096

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 18:30	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 19:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 19:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 19:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 19:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 19:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	79-34-5	

Lab Sample ID: S59014.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 19:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 19:14	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77096

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	**Randy Christensen**
COMPANY	**ARCADIS**
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	**ARCADIS**
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 3 Project#: B006440.2013.

SAMPLER(S) PLEASE PRINT/SIGN NAME: Robert Briggs

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals	Dissolved Arsenic, Lead Vanadium
59014.01	11/14/13	09:05	MW-01 (3)	GW	6	X	X	X					3	2	1	
.02	11/14/13	11:10	UNK-11	GW	7	X	X	X					3	2	1	1
.03	11/14/13	14:05	MW-23	GW	6	X	X	X					3	2	1	
.04	11/14/13	09:55	Equipment Blank-8	L	6	X	X	X					3	2	1	
.05	--	--	Trip Blank	L	1		X						1			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS ☒ Sampler	DATE 11/14/13	TIME 15:00
RECEIVED BY: SIGNATURE/ORGANIZATION	UPS Store	DATE 11.14	TIME 1700
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PM Storage	DATE 11/15/2013	TIME 10:30
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/15/2013	TIME 10:30

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11/15/13	TIME 10:50
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/15/13	TIME 1050

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59013.01(01)
Generated on 12/06/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59013.01-S59013.05
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/14/2013
Submitted Date/Time: 11/15/2013 10:50
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59013.01	UNK-15 (11142013)	Groundwater	11/14/2013 09:35
S59013.02	MW-19 (11142013)	Groundwater	11/14/2013 11:50
S59013.03	MW-06(3) (11142013)	Groundwater	11/14/2013 13:45
S59013.04	UNK-09 (11142013)	Groundwater	11/14/2013 15:40
S59013.05	Trip Blank (11142013)	Liquid	11/14/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S59013.01
Sample Tag: UNK-15 (11142013)
Collected Date/Time: 11/14/2013 09:35
Matrix: Groundwater
COC Reference: 77781

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/04/13 14:05	PER	7440-38-2	
Barium	0.043	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7440-39-3	
Boron	0.15	mg/L	0.04	SW6020A	12/04/13 14:05	PER	7440-42-8	
Cadmium	0.0007	mg/L	0.0005	SW6020A	12/04/13 14:05	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:05	PER	7439-92-1	
Manganese	0.075	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 14:49	CCM	7439-97-6	
Nickel	0.012	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:05	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:05	PER	7440-62-2	
Zinc	0.007	mg/L	0.005	SW6020A	12/04/13 14:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	91-58-7	

Lab Sample ID: S59013.01 (continued)
Sample Tag: UNK-15 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 09:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 09:50	PL	118-74-1	

Lab Sample ID: S59013.01 (continued)
Sample Tag: UNK-15 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 15:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 15:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 15:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 15:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 15:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 15:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 15:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	120-82-1	

Lab Sample ID: S59013.01 (continued)
Sample Tag: UNK-15 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 15:10	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59013.02
Sample Tag: MW-19 (11142013)
Collected Date/Time: 11/14/2013 11:50
Matrix: Groundwater
COC Reference: 77781

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
2	125ml Plastic	HNO3	Yes	5.2	IR
1	125ml Plastic	None	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	SM3500-Cr B	11/15/13 11:30	JKB	18540-29-9	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/04/13 14:09	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	12/04/13 14:07	PER	7440-38-2	
Barium, Dissolved	0.057	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7440-39-3	
Barium	0.076	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7440-39-3	
Boron, Dissolved	Not detected	mg/L	0.04	SW6020A	12/04/13 14:09	PER	7440-42-8	
Boron	Not detected	mg/L	0.04	SW6020A	12/04/13 14:07	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:09	PER	7440-43-9	
Cadmium	0.0010	mg/L	0.0005	SW6020A	12/04/13 14:07	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7440-47-3	
Chromium	0.009	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7440-50-8	
Copper	0.027	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 14:09	PER	7439-92-1	
Lead	0.020	mg/L	0.003	SW6020A	12/04/13 14:07	PER	7439-92-1	
Manganese, Dissolved	0.067	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7439-96-5	
Manganese	0.132	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/19/13 14:53	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 14:51	CCM	7439-97-6	
Nickel, Dissolved	0.012	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7440-02-0	
Nickel	0.020	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:09	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:07	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 14:09	PER	7440-62-2	

Lab Sample ID: S59013.02 (continued)
Sample Tag: MW-19 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:07	PER	7440-62-2	
Zinc, Dissolved	0.048	mg/L	0.005	SW6020A	12/04/13 14:09	PER	7440-66-6	
Zinc	0.244	mg/L	0.005	SW6020A	12/04/13 14:07	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 10:23	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/27/13 10:23	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	193-39-5	

B-Compound also found in associated method blank

Lab Sample ID: S59013.02 (continued)
Sample Tag: MW-19 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 10:23	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 16:04	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 15:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 15:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 15:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 15:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 15:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	56-23-5	

Lab Sample ID: S59013.02 (continued)
Sample Tag: MW-19 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-27-4	
Methyl cyclohexane	1	ug/L	1	SW8260C	11/22/13 15:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 15:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 15:30	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59013.03
Sample Tag: MW-06(3) (11142013)
Collected Date/Time: 11/14/2013 13:45
Matrix: Groundwater
COC Reference: 77781

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 18:48	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/04/13 14:11	PER	7440-38-2	
Barium	0.038	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/04/13 14:11	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:11	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:11	PER	7439-92-1	
Manganese	0.096	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 14:55	CCM	7439-97-6	
Nickel	0.007	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:11	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:11	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020A	12/04/13 14:11	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	91-58-7	

Lab Sample ID: S59013.03 (continued)
Sample Tag: MW-06(3) (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 10:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 10:56	PL	118-74-1	

Lab Sample ID: S59013.03 (continued)
Sample Tag: MW-06(3) (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 16:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 15:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 15:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 15:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	156-60-5	
1,1-Dichloroethane	4	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	67-66-3	
1,1,1-Trichloroethane	22	ug/L	1	SW8260C	11/22/13 15:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 15:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 15:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 15:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	120-82-1	

Lab Sample ID: S59013.03 (continued)
Sample Tag: MW-06(3) (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 15:51	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59013.04
Sample Tag: UNK-09 (11142013)
Collected Date/Time: 11/14/2013 15:40
Matrix: Groundwater
COC Reference: 77781

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7440-36-0	
Arsenic	0.020	mg/L	0.002	SW6020A	12/04/13 14:12	PER	7440-38-2	
Barium	0.055	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020A	12/04/13 14:12	PER	7440-42-8	
Cadmium	0.0009	mg/L	0.0005	SW6020A	12/04/13 14:12	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7440-48-4	
Copper	0.005	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:12	PER	7439-92-1	
Manganese	0.052	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 14:57	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:12	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:12	PER	7440-62-2	
Zinc	0.028	mg/L	0.005	SW6020A	12/04/13 14:12	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	91-58-7	

Lab Sample ID: S59013.04 (continued)
Sample Tag: UNK-09 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 02:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/27/13 02:00	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 02:00	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S59013.04 (continued)
Sample Tag: UNK-09 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 16:41	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 16:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 16:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 16:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 16:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 16:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 16:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	120-82-1	

Lab Sample ID: S59013.04 (continued)
Sample Tag: UNK-09 (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 16:11	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59013.05
Sample Tag: Trip Blank (11142013)
Collected Date/Time: 11/14/2013 00:01
Matrix: Liquid
COC Reference: 77781

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 16:59	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 16:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 16:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 16:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 16:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 16:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	79-34-5	

Lab Sample ID: S59013.05 (continued)
Sample Tag: Trip Blank (11142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 16:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 16:32	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

77781

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant 5 Project#: B006448.00.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC Soil 1,4 Dioxane SIM	TCL SVOC	TAL METALS	DISSOLVED TAL METALS	HEXAVALENT CHROMIUM
590/3.01	11/14/13	9:35	UNK-15 (11142013)	GW	6	2	3	1					X	X	X		
.02	11/14/13	11:50	MW-19 (11142013)	GW	6	3	3	2					X	X	X	X	X
.03	11/14/13	13:45	MW-06(3) (11142013)	GW	6	2	3	1					X	X	X		
.04	11/14/13	15:40	UNK-09 (11142013)	GW	6	2	3	1					X	X	X		
.05	—	—	TRIP BLANK (11142013)	L	1		1						X				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS	☒ Sampler	DATE 11-14-13	TIME 16:35
RECEIVED BY: SIGNATURE/ORGANIZATION	PME Signature		DATE 11-14	TIME 17:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	PM storage		DATE 11/15/13	TIME 10:30
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 11/15/13	TIME 10:30

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE 11/15/13	TIME 10:50
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George		DATE 11/15/13	TIME 1050

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.2
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59015.01(01)
Generated on 12/06/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59015.01-S59015.06
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/14/2013
Submitted Date/Time: 11/15/2013 10:50
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59015.01	MW-03-04 (11-14)	Groundwater	11/14/2013 08:30
S59015.02	MW-02-02 (11-14)	Groundwater	11/14/2013 10:15
S59015.03	SME-MW-02 (11-14)	Groundwater	11/14/2013 11:30
S59015.04	MW-04-01 (11-14)	Groundwater	11/14/2013 15:00
S59015.05	Trip Blank	Groundwater	11/14/2013 07:00
S59015.06	Dup-8	Groundwater	11/14/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S59015.01
Sample Tag: MW-03-04 (11-14)
Collected Date/Time: 11/14/2013 08:30
Matrix: Groundwater
COC Reference: 77780

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7440-36-0	
Arsenic	0.021	mg/L	0.002	SW6020A	12/04/13 14:38	PER	7440-38-2	
Barium	0.351	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020A	12/04/13 14:38	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:38	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:38	PER	7439-92-1	
Manganese	0.130	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:15	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:38	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:38	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 14:38	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	91-58-7	

Lab Sample ID: S59015.01 (continued)
Sample Tag: MW-03-04 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 04:48	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 04:48	PL	118-74-1	

Lab Sample ID: S59015.01 (continued)
Sample Tag: MW-03-04 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	45	ug/L	5	SW8260B - SIM	11/25/13 18:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 19:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 19:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 19:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 19:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 19:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 19:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	120-82-1	

Lab Sample ID: S59015.01 (continued)
Sample Tag: MW-03-04 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 19:35	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59015.02
Sample Tag: MW-02-02 (11-14)
Collected Date/Time: 11/14/2013 10:15
Matrix: Groundwater
COC Reference: 77780

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7440-36-0	
Arsenic	0.047	mg/L	0.002	SW6020A	12/04/13 14:40	PER	7440-38-2	
Barium	1.14	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020A	12/04/13 14:40	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:40	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:40	PER	7439-92-1	
Manganese	0.116	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:17	CCM	7439-97-6	
Nickel	0.023	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7782-49-2	
Silver	0.0010	mg/L	0.0005	SW6020A	12/04/13 14:40	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:40	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	12/04/13 14:40	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	91-58-7	

Lab Sample ID: S59015.02 (continued)
Sample Tag: MW-02-02 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 19:18	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 19:18	PL	118-74-1	

Lab Sample ID: S59015.02 (continued)
Sample Tag: MW-02-02 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	21	ug/L	5	SW8260B - SIM	11/25/13 19:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 19:55	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 19:55	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 19:55	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 19:55	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 19:55	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 19:55	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	120-82-1	

Lab Sample ID: S59015.02 (continued)
Sample Tag: MW-02-02 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 19:55	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59015.03
Sample Tag: SME-MW-02 (11-14)
Collected Date/Time: 11/14/2013 11:30
Matrix: Groundwater
COC Reference: 77780

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020A	12/04/13 14:41	PER	7440-38-2	
Barium	0.331	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020A	12/04/13 14:41	PER	7440-42-8	
Cadmium	0.0018	mg/L	0.0005	SW6020A	12/04/13 14:41	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:41	PER	7439-92-1	
Manganese	0.015	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:19	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:41	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:41	PER	7440-62-2	
Zinc	0.018	mg/L	0.005	SW6020A	12/04/13 14:41	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	91-58-7	

Lab Sample ID: S59015.03 (continued)
Sample Tag: SME-MW-02 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 19:52	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 19:52	PL	118-74-1	

Lab Sample ID: S59015.03 (continued)
Sample Tag: SME-MW-02 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	10	ug/L	5	SW8260B - SIM	11/25/13 19:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 20:15	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 20:15	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 20:15	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 20:15	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 20:15	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 20:15	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	120-82-1	

Lab Sample ID: S59015.03 (continued)
Sample Tag: SME-MW-02 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 20:15	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59015.04
Sample Tag: MW-04-01 (11-14)
Collected Date/Time: 11/14/2013 15:00
Matrix: Groundwater
COC Reference: 77780

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
2	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7440-36-0	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020A	12/04/13 14:45	PER	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020A	12/04/13 14:43	PER	7440-38-2	
Barium, Dissolved	0.142	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7440-39-3	
Barium	0.150	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020A	12/04/13 14:45	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020A	12/04/13 14:43	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:45	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:43	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7440-47-3	
Chromium	0.006	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7440-47-3	
Cobalt, Dissolved	0.011	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7440-48-4	
Cobalt	0.012	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 14:45	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:43	PER	7439-92-1	
Manganese, Dissolved	0.419	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7439-96-5	
Manganese	0.453	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:23	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:21	CCM	7439-97-6	
Nickel, Dissolved	0.022	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7440-02-0	
Nickel	0.025	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:45	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:43	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 14:45	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:43	PER	7440-62-2	
Zinc, Dissolved	0.006	mg/L	0.005	SW6020A	12/04/13 14:45	PER	7440-66-6	
Zinc	0.007	mg/L	0.005	SW6020A	12/04/13 14:43	PER	7440-66-6	

Lab Sample ID: S59015.04 (continued)
Sample Tag: MW-04-01 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 20:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	88-75-5	

Lab Sample ID: S59015.04 (continued)
Sample Tag: MW-04-01 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 20:25	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 19:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 20:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 20:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 20:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 20:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 20:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	108-87-2	

Lab Sample ID: S59015.04 (continued)
Sample Tag: MW-04-01 (11-14)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 20:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 20:35	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59015.05
Sample Tag: Trip Blank
Collected Date/Time: 11/14/2013 07:00
Matrix: Groundwater
COC Reference: 77780

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:46	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 20:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 20:56	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 20:56	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 20:56	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 20:56	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 20:56	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	79-34-5	

Lab Sample ID: S59015.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 20:56	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 20:56	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59015.06
Sample Tag: Dup-8
Collected Date/Time: 11/14/2013 00:01
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:51	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7440-36-0	
Arsenic	0.021	mg/L	0.002	SW6020A	12/04/13 14:47	PER	7440-38-2	
Barium	0.353	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020A	12/04/13 14:47	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:47	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 14:47	PER	7439-92-1	
Manganese	0.141	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:25	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 14:47	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 14:47	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 14:47	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	91-58-7	

Lab Sample ID: S59015.06 (continued)
Sample Tag: Dup-8

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 20:59	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 20:59	PL	118-74-1	

Lab Sample ID: S59015.06 (continued)
Sample Tag: Dup-8

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	44	ug/L	5	SW8260B - SIM	11/25/13 20:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/22/13 21:16	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/22/13 21:16	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/22/13 21:16	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/22/13 21:16	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/22/13 21:16	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/22/13 21:16	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	120-82-1	

Lab Sample ID: S59015.06 (continued)
Sample Tag: Dup-8

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/22/13 21:16	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

77780

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: **Randy Christensen**
COMPANY: **ARCADIS**
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1910 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY: **ARCADIS**
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Lansing Plant 6 Project#: B00644 .2013.
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wells

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 01 1-45 M	TAL Metal	SVOCs	Diss TAL Metal
59015.01	11-14	8:30	MW-03-04 (11-14)	GW	6	2	3	[redacted]					X	X	X	
.02	11-14	10:15	MW-02-02 (11-14)	GW	6	2	3	[redacted]					X	X	X	
.03	11-14	11:30	SME - MW-02 (11-14)	GW	6	2	3	[redacted]					X	X	X	
.04	11-14	15:00	MW-04-01 (11-14)	GW	7	2	3	2					X	X	X	X
.05	11-14	7:00	Trip Blank	GW	1		1						X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE 11-14	TIME 17:00
RECEIVED BY: SIGNATURE/ORGANIZATION	SME Steam	DATE 11-14	TIME 17:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	SME Steam	DATE 11-15-13	TIME 10:30
RECEIVED BY: SIGNATURE/ORGANIZATION	[redacted]	DATE 11/15/13	TIME 10:30

RELINQUISHED BY: SIGNATURE/ORGANIZATION	[redacted]	DATE 11/15/2013	TIME 10:50
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/15/13	TIME 1050

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59037.01(01)
Generated on 12/06/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59037.01-S59037.06
Project: Lansing Plant 3 Project#: B0064480.2013.
Collected Date: 11/15/2013
Submitted Date/Time: 11/15/2013 15:35
Sampled by: Billy J Coben
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59037.01	Trip Blank (11152013)	Liquid	11/15/2013 00:01
S59037.02	Field Blank-2 (11152013)	Liquid	11/15/2013 07:45
S59037.03	MW-13-39B (11152013)	Groundwater	11/15/2013 09:40
S59037.04	MW-13-34 (11152013)	Groundwater	11/15/2013 11:45
S59037.05	MW-91-6 (11152013)	Groundwater	11/15/2013 13:20
S59037.06	UNK-10 (11152013)	Groundwater	11/15/2013 14:25

Analytical Laboratory Report

Lab Sample ID: S59037.01
Sample Tag: Trip Blank (11152013)
Collected Date/Time: 11/15/2013 00:01
Matrix: Liquid
COC Reference: 77778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 21:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 02:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 02:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 02:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 02:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 02:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	79-34-5	

Lab Sample ID: S59037.01 (continued)
Sample Tag: Trip Blank (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 02:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:42	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59037.02
Sample Tag: Field Blank-2 (11152013)
Collected Date/Time: 11/15/2013 07:45
Matrix: Liquid
COC Reference: 77778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 23:13	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	117-81-7	

Lab Sample ID: S59037.02 (continued)
Sample Tag: Field Blank-2 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 23:13	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 22:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 03:02	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 03:02	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 03:02	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	156-59-2	

Lab Sample ID: S59037.02 (continued)
Sample Tag: Field Blank-2 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 03:02	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 03:02	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 03:02	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:02	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59037.03
Sample Tag: MW-13-39B (11152013)
Collected Date/Time: 11/15/2013 09:40
Matrix: Groundwater
COC Reference: 77778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020A	12/04/13 16:13	PER	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020A	12/04/13 16:12	PER	7440-38-2	
Barium, Dissolved	0.075	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7440-39-3	
Barium	0.077	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020A	12/04/13 16:13	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020A	12/04/13 16:12	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:13	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:12	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 16:13	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 16:12	PER	7439-92-1	
Manganese, Dissolved	0.143	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7439-96-5	
Manganese	0.154	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:38	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:36	CCM	7439-97-6	
Nickel, Dissolved	0.014	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7440-02-0	
Nickel	0.015	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:13	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:12	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 16:13	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 16:12	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:13	PER	7440-66-6	
Zinc	0.006	mg/L	0.005	SW6020A	12/04/13 16:12	PER	7440-66-6	

Lab Sample ID: S59037.03 (continued)
Sample Tag: MW-13-39B (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 23:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	88-75-5	

Lab Sample ID: S59037.03 (continued)
Sample Tag: MW-13-39B (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 23:47	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 22:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/26/13 19:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/26/13 19:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/26/13 19:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/26/13 19:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/26/13 19:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	108-87-2	

Lab Sample ID: S59037.03 (continued)
Sample Tag: MW-13-39B (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/26/13 19:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/26/13 19:35	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59037.04
Sample Tag: MW-13-34 (11152013)
Collected Date/Time: 11/15/2013 11:45
Matrix: Groundwater
COC Reference: 77778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020A	12/04/13 16:22	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	12/04/13 16:15	PER	7440-38-2	
Barium, Dissolved	0.174	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7440-39-3	
Barium	0.190	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7440-39-3	
Boron, Dissolved	0.20	mg/L	0.04	SW6020A	12/04/13 16:22	PER	7440-42-8	
Boron	0.19	mg/L	0.04	SW6020A	12/04/13 16:15	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:22	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:15	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7440-47-3	
Chromium	0.013	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 16:22	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 16:15	PER	7439-92-1	
Manganese, Dissolved	0.258	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7439-96-5	
Manganese	0.310	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:42	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:40	CCM	7439-97-6	
Nickel, Dissolved	0.019	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7440-02-0	
Nickel	0.022	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:22	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:15	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 16:22	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 16:15	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:22	PER	7440-66-6	
Zinc	0.017	mg/L	0.005	SW6020A	12/04/13 16:15	PER	7440-66-6	

Lab Sample ID: S59037.04 (continued)
Sample Tag: MW-13-34 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/28/13 00:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	88-75-5	

Lab Sample ID: S59037.04 (continued)
Sample Tag: MW-13-34 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/28/13 00:20	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	99	ug/L	5	SW8260B - SIM	11/25/13 22:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 03:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 03:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 03:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 03:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 03:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	108-87-2	

Lab Sample ID: S59037.04 (continued)
Sample Tag: MW-13-34 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 03:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 03:42	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59037.05
Sample Tag: MW-91-6 (11152013)
Collected Date/Time: 11/15/2013 13:20
Matrix: Groundwater
COC Reference: 77778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7440-36-0	
Arsenic	0.010	mg/L	0.002	SW6020A	12/04/13 16:23	PER	7440-38-2	
Barium	0.132	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020A	12/04/13 16:23	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:23	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 16:23	PER	7439-92-1	
Manganese	0.146	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:44	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:23	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 16:23	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020A	12/04/13 16:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	91-58-7	

Lab Sample ID: S59037.05 (continued)
Sample Tag: MW-91-6 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/28/13 00:54	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/28/13 00:54	PL	118-74-1	

Lab Sample ID: S59037.05 (continued)
Sample Tag: MW-91-6 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 23:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 04:02	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 04:02	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 04:02	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 04:02	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 04:02	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 04:02	WAT		
o-Xylene	1	ug/L	1	SW8260C	11/24/13 04:02	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	120-82-1	

Lab Sample ID: S59037.05 (continued)
Sample Tag: MW-91-6 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 04:02	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59037.06
Sample Tag: UNK-10 (11152013)
Collected Date/Time: 11/15/2013 14:25
Matrix: Groundwater
COC Reference: 77778

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020A	12/04/13 17:16	PER	7440-38-2	
Barium	0.053	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7440-39-3	
Boron	0.14	mg/L	0.04	SW6020A	12/04/13 17:16	PER	7440-42-8	
Cadmium	0.0015	mg/L	0.0005	SW6020A	12/04/13 17:16	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7440-48-4	
Copper	0.011	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7440-50-8	
Lead	0.005	mg/L	0.003	SW6020A	12/04/13 17:16	PER	7439-92-1	
Manganese	0.218	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:46	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:16	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 17:16	PER	7440-62-2	
Zinc	0.113	mg/L	0.005	SW6020A	12/04/13 17:16	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	100-52-7	
Benzo(a)anthracene	3	ug/L	1	SW8270D	11/28/13 01:27	PL	56-55-3	
Benzo(a)pyrene	3	ug/L	1	SW8270D	11/28/13 01:27	PL	50-32-8	
Benzo(b)fluoranthene	3	ug/L	1	SW8270D	11/28/13 01:27	PL	205-99-2	
Benzo(ghi)perylene	1	ug/L	1	SW8270D	11/28/13 01:27	PL	191-24-2	
Benzo(k)fluoranthene	3	ug/L	1	SW8270D	11/28/13 01:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	91-58-7	

Lab Sample ID: S59037.06 (continued)
Sample Tag: UNK-10 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	108-60-1	
Chrysene	3	ug/L	1	SW8270D	11/28/13 01:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/28/13 01:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	117-81-7	
Fluoranthene	4	ug/L	1	SW8270D	11/28/13 01:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	1	ug/L	1	SW8270D	11/28/13 01:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	87-86-5	
Phenanthrene	1	ug/L	1	SW8270D	11/28/13 01:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	108-95-2	
Pyrene	5	ug/L	1	SW8270D	11/28/13 01:27	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/28/13 01:27	PL	118-74-1	

Lab Sample ID: S59037.06 (continued)
Sample Tag: UNK-10 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/26/13 20:58	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 04:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 04:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 04:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 04:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 04:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 04:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	120-82-1	

Lab Sample ID: S59037.06 (continued)
Sample Tag: UNK-10 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 04:23	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

77778

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006442.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Brian J. Colburn

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs + 1,4 Dioxane + Ethanol	TCL SVOCs	TAL Metals	Dissolved TAL Metals
S9037.01	—	—	Trip Blank (11152013)	L	1		X						X			
.02	11/15/13	7:45	Field Blank-2 (11152013)	L	5	2	3						X	X		
.03	11/15/13	9:40	MW-13-39B (11152013)	GW	7	2	3	2					X	X	X	X
.04	11/15/13	11:45	MW-13-34 (11152013)	GW	7	2	3	2					X	X	X	X
.05	11/15/13	13:20	MW-91-6 (11152013)	GW	6	2	3	1					X	X	X	
.06	11/15/13	14:25	UNK-10 (11152013)	GW	6	2	3	1					X	X	X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS X Sampler	DATE 11-15-13	TIME 15:10
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/15/13	TIME 1510
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11/15/13	TIME 15:35
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Ball	DATE 11/15/13	TIME 15:35
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59038.01(01)
Generated on 12/06/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59038.01-S59038.06
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/15/2013
Submitted Date/Time: 11/15/2013 15:35
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59038.01	MW-03-07(11-15)	Groundwater	11/15/2013 08:30
S59038.02	MW-03-08(11-15)	Groundwater	11/15/2013 10:30
S59038.03	P6-SB-32(11-15)	Groundwater	11/15/2013 12:30
S59038.04	P6-SB-07(11-15)	Groundwater	11/15/2013 13:30
S59038.05	Trip Blank	Groundwater	11/15/2013 07:00
S59038.06	EquipBlank-9	Groundwater	11/15/2013 09:30

Analytical Laboratory Report

Lab Sample ID: S59038.01
Sample Tag: MW-03-07(11-15)
Collected Date/Time: 11/15/2013 08:30
Matrix: Groundwater
COC Reference: 79785

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-36-0	
Arsenic, Dissolved	0.017	mg/L	0.002	SW6020A	12/04/13 17:22	PER	7440-38-2	
Arsenic	0.017	mg/L	0.002	SW6020A	12/04/13 17:22	PER	7440-38-2	
Barium, Dissolved	0.234	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-39-3	
Barium	0.234	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-39-3	
Boron, Dissolved	0.10	mg/L	0.04	SW6020A	12/04/13 17:22	PER	7440-42-8	
Boron	0.10	mg/L	0.04	SW6020A	12/04/13 17:22	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:22	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:22	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 17:22	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 17:22	PER	7439-92-1	
Manganese, Dissolved	0.066	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7439-96-5	
Manganese	0.066	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:50	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:48	CCM	7439-97-6	
Nickel, Dissolved	0.008	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-02-0	
Nickel	0.008	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:22	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:22	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 17:22	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 17:22	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 17:22	PER	7440-66-6	

Lab Sample ID: S59038.01 (continued)
Sample Tag: MW-03-07(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/28/13 02:01	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	11/28/13 02:01	PL	117-81-7	B
Fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S59038.01 (continued)
Sample Tag: MW-03-07(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/28/13 02:01	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	27	ug/L	5	SW8260B - SIM	11/26/13 19:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 04:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 04:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 04:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 04:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 04:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-27-4	

Lab Sample ID: S59038.01 (continued)
Sample Tag: MW-03-07(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 04:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 04:43	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59038.02
Sample Tag: MW-03-08(11-15)
Collected Date/Time: 11/15/2013 10:30
Matrix: Groundwater
COC Reference: 79785

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020A	12/04/13 17:23	PER	7440-38-2	
Barium	0.255	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020A	12/04/13 17:23	PER	7440-42-8	
Cadmium	0.0010	mg/L	0.0005	SW6020A	12/04/13 17:23	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7440-48-4	
Copper	0.021	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7440-50-8	
Lead	0.012	mg/L	0.003	SW6020A	12/04/13 17:23	PER	7439-92-1	
Manganese	0.078	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 16:02	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:23	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 17:23	PER	7440-62-2	
Zinc	0.039	mg/L	0.005	SW6020A	12/04/13 17:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	91-58-7	

Lab Sample ID: S59038.02 (continued)
Sample Tag: MW-03-08(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/28/13 02:34	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/28/13 02:34	PL	118-74-1	

Lab Sample ID: S59038.02 (continued)
Sample Tag: MW-03-08(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/26/13 19:27	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 05:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 05:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 05:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 05:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 05:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 05:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	120-82-1	

Lab Sample ID: S59038.02 (continued)
Sample Tag: MW-03-08(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 05:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59038.03
Sample Tag: P6-SB-32(11-15)
Collected Date/Time: 11/15/2013 12:30
Matrix: Groundwater
COC Reference: 79785

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/20/13 15:29	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7440-36-0	
Arsenic, Dissolved	0.015	mg/L	0.002	SW6020A	12/04/13 17:27	PER	7440-38-2	
Arsenic	0.017	mg/L	0.002	SW6020A	12/04/13 17:25	PER	7440-38-2	
Barium, Dissolved	0.197	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7440-39-3	
Barium	0.203	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7440-39-3	
Boron, Dissolved	0.27	mg/L	0.04	SW6020A	12/04/13 17:27	PER	7440-42-8	
Boron	0.28	mg/L	0.04	SW6020A	12/04/13 17:25	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:27	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:25	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7440-47-3	
Chromium	0.007	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7440-50-8	
Copper	0.006	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 17:27	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 17:25	PER	7439-92-1	
Manganese, Dissolved	0.156	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7439-96-5	
Manganese	0.159	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/20/13 16:06	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 16:04	CCM	7439-97-6	
Nickel, Dissolved	0.020	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7440-02-0	
Nickel	0.020	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:27	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:25	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 17:27	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 17:25	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 17:27	PER	7440-66-6	
Zinc	0.005	mg/L	0.005	SW6020A	12/04/13 17:25	PER	7440-66-6	

Lab Sample ID: S59038.03 (continued)
Sample Tag: P6-SB-32(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	120-83-2	
2,4-Dimethylphenol	20	ug/L	1	SW8270D	11/24/13 14:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/24/13 14:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	132-64-9	
Diethyl phthalate	2	ug/L	1	SW8270D	11/24/13 14:47	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	78-59-1	
2-Methylnaphthalene	1	ug/L	1	SW8270D	11/24/13 14:47	PL	91-57-6	
2-Methylphenol	2	ug/L	1	SW8270D	11/24/13 14:47	PL	95-48-7	
3-, 4-Methylphenol	41	ug/L	1	SW8270D	11/24/13 14:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	88-75-5	

Lab Sample ID: S59038.03 (continued)
Sample Tag: P6-SB-32(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	86-30-6	
Naphthalene	124	ug/L	1	SW8270D	11/24/13 14:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/24/13 14:47	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/26/13 19:45	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	76-13-1	Y
Acetone	210	ug/L	200	SW8260C	11/25/13 20:27	WAT	67-64-1	Y
Carbon disulfide	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-15-0	Y
Methyl Acetate	Not detected	ug/L	200	SW8260C	11/25/13 20:27	WAT	79-20-9	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	1634-04-4	Y
2-Butanone (MEK)	Not detected	ug/L	200	SW8260C	11/25/13 20:27	WAT	78-93-3	Y
Dichlorodifluoromethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-71-8	Y
Chloromethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	74-87-3	Y
Vinyl chloride	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-01-4	Y
Bromomethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	74-83-9	Y
Chloroethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-00-3	Y
Trichlorofluoromethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-69-4	Y
1,1-Dichloroethene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-35-4	Y
Methylene chloride	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	156-60-5	Y
1,1-Dichloroethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	156-59-2	Y
Chloroform	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	67-66-3	Y
1,1,1-Trichloroethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	71-55-6	Y
Cyclohexane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	110-82-7	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	200	SW8260C	11/25/13 20:27	WAT	108-10-1	Y
2-Hexanone	Not detected	ug/L	200	SW8260C	11/25/13 20:27	WAT	591-78-6	Y
Carbon tetrachloride	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	56-23-5	Y
Benzene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	71-43-2	Y
1,2-Dichloroethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	107-06-2	Y
Trichloroethene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	79-01-6	Y
1,2-Dichloropropane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	78-87-5	Y
Bromodichloromethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-27-4	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S59038.03 (continued)
Sample Tag: P6-SB-32(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	108-87-2	Y
cis-1,3-Dichloropropene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	10061-01-5	Y
Toluene	290	ug/L	20	SW8260C	11/25/13 20:27	WAT	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	79-00-5	Y
Tetrachloroethene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	127-18-4	Y
Dibromochloromethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	124-48-1	Y
Chlorobenzene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	108-90-7	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	79-34-5	Y
Ethylbenzene	640	ug/L	20	SW8260C	11/25/13 20:27	WAT	100-41-4	Y
p,m-Xylene	4,500	ug/L	40	SW8260C	11/25/13 20:27	WAT		Y
o-Xylene	2,110	ug/L	20	SW8260C	11/25/13 20:27	WAT	95-47-6	Y
Styrene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	100-42-5	Y
Isopropylbenzene	200	ug/L	20	SW8260C	11/25/13 20:27	WAT	98-82-8	Y
Bromoform	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	75-25-2	Y
1,3-Dichlorobenzene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	541-73-1	Y
1,4-Dichlorobenzene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	106-46-7	Y
1,2-Dichlorobenzene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	95-50-1	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	120-82-1	Y
1,2-Dibromoethane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	106-93-4	Y
1,2-Dibromo-3-chloropropane	Not detected	ug/L	20	SW8260C	11/25/13 20:27	WAT	96-12-8	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S59038.04
Sample Tag: P6-SB-07(11-15)
Collected Date/Time: 11/15/2013 13:30
Matrix: Groundwater
COC Reference: 79785

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/20/13 15:29	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/04/13 17:29	PER	7440-38-2	
Barium	0.051	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020A	12/04/13 17:29	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:29	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 17:29	PER	7439-92-1	
Manganese	0.045	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 15:52	CCM	7439-97-6	
Nickel	0.007	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:29	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 17:29	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020A	12/04/13 17:29	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	91-58-7	

Lab Sample ID: S59038.04 (continued)
Sample Tag: P6-SB-07(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/24/13 15:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/24/13 15:20	PL	118-74-1	

Lab Sample ID: S59038.04 (continued)
Sample Tag: P6-SB-07(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/26/13 20:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/25/13 16:26	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/25/13 16:26	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/25/13 16:26	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/25/13 16:26	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/25/13 16:26	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/25/13 16:26	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	120-82-1	

Lab Sample ID: S59038.04 (continued)
Sample Tag: P6-SB-07(11-15)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/25/13 16:26	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59038.05
Sample Tag: Trip Blank
Collected Date/Time: 11/15/2013 07:00
Matrix: Groundwater
COC Reference: 79785

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/26/13 20:21	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/25/13 16:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/25/13 16:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/25/13 16:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/25/13 16:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/25/13 16:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	79-34-5	

Lab Sample ID: S59038.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/25/13 16:46	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/25/13 16:46	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59038.06
Sample Tag: EquipBlank-9
Collected Date/Time: 11/15/2013 09:30
Matrix: Groundwater
COC Reference: 79785

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/20/13 15:29	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 11:00	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/04/13 17:08	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/04/13 17:08	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:08	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 17:08	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/20/13 16:08	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 17:08	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 17:08	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 17:08	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	91-58-7	

Lab Sample ID: S59038.06 (continued)
Sample Tag: EquipBlank-9

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/24/13 15:53	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/24/13 15:53	PL	118-74-1	

Lab Sample ID: S59038.06 (continued)
Sample Tag: EquipBlank-9

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/26/13 20:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 06:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 06:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 06:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 06:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 06:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 06:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	120-82-1	

Lab Sample ID: S59038.06 (continued)
Sample Tag: EquipBlank-9

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 06:24	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

79785

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☑ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Lansing Plant Project#: B00644 .2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wallis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 01-4 SVOC	TAL METAL	Diss TAL Metal	SVOCs								
59038.01	11-15	8:30	MW-03-07 (11-15)	GW	7	2	3	2					X	X	X	X							
.02	11-15	10:30	MW-03-08 (11-15)	GW	6	2	3	1					X	X		X							
.03	11-15	12:30	P6-SB-32 (11-15)	GW	7	2	3	2					X	X	X	X							
.04	11-15	13:30	P6-SB-07 (11-15)	GW	6	2	3	1					X	X		X							
.05	11-15	7:00	TRIP BLANK	GW	1		1						X										
.06	11-15	9:30	EQUIP BLANK-9	GW	6	2	3	1					X	X		X							

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE 11-15	TIME 14:00
RECEIVED BY: SIGNATURE/ORGANIZATION	ARCADIS	DATE 11-15-13	TIME 14:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS	DATE 11-15-13	TIME 15:10
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/15/13	TIME 1510

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11/13/13	TIME 15:35
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Ball	DATE 11/15/13	TIME 15:35
SEAL NO.	SEAL INTACT YES☐ NO☐	INITIALS	
SEAL NO.	SEAL INTACT YES☐ NO☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Revised Report

Report ID: S58889.01(02)
Generated on 01/08/2014
Replaces report S58889.01(01) generated on 11/21/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58889.01-S58889.03
Project: Lansing Plant 3 Project#: B0064480.2013.00106
Collected Date: 11/07/2013
Submitted Date/Time: 11/08/2013 09:00
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Sample tag for 58889.02 changed per client request.

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58889.01	MW-13-31	Groundwater	11/07/2013 08:15
S58889.02	MW-14-01(3)	Groundwater	11/07/2013 14:56
S58889.03	Trip Blank	Liquid	11/07/2013 00:01

Lab Sample ID: S58889.01
Sample Tag: MW-13-31
Collected Date/Time: 11/07/2013 08:15
Matrix: Groundwater
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	11/21/13 16:44	PER	7440-38-2	
Arsenic	0.004	mg/L	0.002	SW6020A	11/21/13 16:41	PER	7440-38-2	
Barium, Dissolved	0.153	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-39-3	
Barium	0.364	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-39-3	
Boron, Dissolved	0.25	mg/L	0.04	SW6020A	11/21/13 16:44	PER	7440-42-8	
Boron	0.27	mg/L	0.04	SW6020A	11/21/13 16:41	PER	7440-42-8	
Cadmium, Dissolved	0.0009	mg/L	0.0005	SW6020A	11/21/13 16:44	PER	7440-43-9	
Cadmium	0.0033	mg/L	0.0005	SW6020A	11/21/13 16:41	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-47-3	
Chromium	0.018	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-50-8	
Copper	0.117	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/21/13 16:44	PER	7439-92-1	
Lead	0.337	mg/L	0.003	SW6020A	11/21/13 16:41	PER	7439-92-1	
Manganese, Dissolved	0.058	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7439-96-5	
Manganese	0.165	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:56	CCM	7439-97-6	
Mercury	0.0002	mg/L	0.0001	SW7471B	11/11/13 16:44	CCM	7439-97-6	
Nickel, Dissolved	0.024	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-02-0	
Nickel	0.078	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-02-0	
Selenium, Dissolved	0.011	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7782-49-2	
Selenium	0.011	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:44	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:41	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/21/13 16:44	PER	7440-62-2	
Vanadium	0.024	mg/L	0.004	SW6020A	11/21/13 16:41	PER	7440-62-2	
Zinc, Dissolved	0.392	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-66-6	
Zinc	0.883	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-66-6	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 04:23	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/19/13 04:23	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-75-5	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-87-2	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 18:57	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	96-12-8	

Lab Sample ID: S58889.02
Sample Tag: MW-14-01(3)
Collected Date/Time: 11/07/2013 14:56
Matrix: Groundwater
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020A	11/21/13 16:48	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	11/21/13 16:46	PER	7440-38-2	
Barium, Dissolved	0.049	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-39-3	
Barium	0.052	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020A	11/21/13 16:48	PER	7440-42-8	
Boron	0.13	mg/L	0.04	SW6020A	11/21/13 16:46	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:48	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:46	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/21/13 16:48	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 16:46	PER	7439-92-1	
Manganese, Dissolved	0.020	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7439-96-5	
Manganese	0.034	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:00	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:58	CCM	7439-97-6	
Nickel, Dissolved	0.009	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-02-0	
Nickel	0.010	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:48	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:46	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/21/13 16:48	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 16:46	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-66-6	
Zinc	0.014	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-66-6	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-14-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 04:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/19/13 04:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-75-5	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-14-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-87-2	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-14-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 19:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	96-12-8	

Lab Sample ID: S58889.03
Sample Tag: Trip Blank
Collected Date/Time: 11/07/2013 00:01
Matrix: Liquid
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 15:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-34-5	

Lab Sample ID: S58889.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 19:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

77081

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.02013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals	TAL Dissolved Metals
58889.01	11/07/13	08:15	MW-13 31	GW	7	X	X	X					3	2	1	1
.02	11/07/13	14:56	MW-04-01	GW	7	X	X	X					3	2	1	1
.03	- -	- -	Trip Blank	- -	- -		X						1			

RELINQUISHED BY: SIGNATURE/ORGANIZATION — Sampler — DATE 11/08/13 TIME 0725

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11/08/13 TIME 0725

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE — TIME

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11.8.13 TIME 0800

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE 11-8-13 TIME

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11/8/13 TIME 900

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

NOTES: TEMP. ON ARRIVAL 5.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Revised Report

Report ID: S58889.01(03)
Generated on 01/08/2014
Replaces report S58889.01(02) generated on 01/08/2014

Report to

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Report Summary

Lab Sample ID(s): S58889.01-S58889.03
Project: Lansing Plant 3 Project#: B0064480.2013.00106
Collected Date: 11/07/2013
Submitted Date/Time: 11/08/2013 09:00
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Sample tag for sample 58889.02 changed per client request.

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58889.01	MW-13-31	Groundwater	11/07/2013 08:15
S58889.02	MW-04-01(3)	Groundwater	11/07/2013 14:56
S58889.03	Trip Blank	Liquid	11/07/2013 00:01

Lab Sample ID: S58889.01
Sample Tag: MW-13-31
Collected Date/Time: 11/07/2013 08:15
Matrix: Groundwater
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	11/21/13 16:44	PER	7440-38-2	
Arsenic	0.004	mg/L	0.002	SW6020A	11/21/13 16:41	PER	7440-38-2	
Barium, Dissolved	0.153	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-39-3	
Barium	0.364	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-39-3	
Boron, Dissolved	0.25	mg/L	0.04	SW6020A	11/21/13 16:44	PER	7440-42-8	
Boron	0.27	mg/L	0.04	SW6020A	11/21/13 16:41	PER	7440-42-8	
Cadmium, Dissolved	0.0009	mg/L	0.0005	SW6020A	11/21/13 16:44	PER	7440-43-9	
Cadmium	0.0033	mg/L	0.0005	SW6020A	11/21/13 16:41	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-47-3	
Chromium	0.018	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-50-8	
Copper	0.117	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/21/13 16:44	PER	7439-92-1	
Lead	0.337	mg/L	0.003	SW6020A	11/21/13 16:41	PER	7439-92-1	
Manganese, Dissolved	0.058	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7439-96-5	
Manganese	0.165	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:56	CCM	7439-97-6	
Mercury	0.0002	mg/L	0.0001	SW7471B	11/11/13 16:44	CCM	7439-97-6	
Nickel, Dissolved	0.024	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-02-0	
Nickel	0.078	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-02-0	
Selenium, Dissolved	0.011	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7782-49-2	
Selenium	0.011	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:44	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:41	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/21/13 16:44	PER	7440-62-2	
Vanadium	0.024	mg/L	0.004	SW6020A	11/21/13 16:41	PER	7440-62-2	
Zinc, Dissolved	0.392	mg/L	0.005	SW6020A	11/21/13 16:44	PER	7440-66-6	
Zinc	0.883	mg/L	0.005	SW6020A	11/21/13 16:41	PER	7440-66-6	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 04:23	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/19/13 04:23	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-75-5	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:23	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 18:57	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-87-2	

Lab Sample ID: S58889.01 (continued)
Sample Tag: MW-13-31

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 18:57	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 18:57	WAT	96-12-8	

Lab Sample ID: S58889.02
Sample Tag: MW-04-01(3)
Collected Date/Time: 11/07/2013 14:56
Matrix: Groundwater
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR
2	1L Amber	None	Yes	5.8	IR
2	125ml Plastic	HNO3	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/13/13 12:53	EMR		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Mercury Digestion	Completed			SW7471B	11/11/13 13:00	CCM		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
Metal Digestion	Completed			SW3015A	11/21/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	11/08/13 14:30	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020A	11/21/13 16:48	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	11/21/13 16:46	PER	7440-38-2	
Barium, Dissolved	0.049	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-39-3	
Barium	0.052	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020A	11/21/13 16:48	PER	7440-42-8	
Boron	0.13	mg/L	0.04	SW6020A	11/21/13 16:46	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:48	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:46	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	11/21/13 16:48	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	11/21/13 16:46	PER	7439-92-1	
Manganese, Dissolved	0.020	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7439-96-5	
Manganese	0.034	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/11/13 17:00	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/11/13 16:58	CCM	7439-97-6	
Nickel, Dissolved	0.009	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-02-0	
Nickel	0.010	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:48	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	11/21/13 16:46	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	11/21/13 16:48	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	11/21/13 16:46	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020A	11/21/13 16:48	PER	7440-66-6	
Zinc	0.014	mg/L	0.005	SW6020A	11/21/13 16:46	PER	7440-66-6	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-04-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/19/13 04:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/19/13 04:56	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-75-5	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-04-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/19/13 04:56	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 19:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-87-2	

Lab Sample ID: S58889.02 (continued)
Sample Tag: MW-04-01(3)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 19:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:19	WAT	96-12-8	

Lab Sample ID: S58889.03
Sample Tag: Trip Blank
Collected Date/Time: 11/07/2013 00:01
Matrix: Liquid
COC Reference: 77081

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/08/13 15:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/08/13 22:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/12/13 19:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	79-34-5	

Lab Sample ID: S58889.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/12/13 19:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/12/13 19:41	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

77081

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant 3 Project#: B006448.02013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals	TAL Dissolved Metals
58889.01	11/07/13	08:15	MW-13 31	GW	7	X	X	X					3	2	1	1
.02	11/07/13	14:56	MW-04-01	GW	7	X	X	X					3	2	1	1
.03	- -	- -	Trip Blank	- -	- -		X						1			

RELINQUISHED BY: SIGNATURE/ORGANIZATION — Sampler — DATE 11/08/13 TIME 0725

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11/08/13 TIME 0725

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE — TIME

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11.8.13 TIME 0800

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE 11-8-13 TIME

RECEIVED BY: SIGNATURE/ORGANIZATION — DATE 11/8/13 TIME 900

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

NOTES: TEMP. ON ARRIVAL 5.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59021.01(01)
Generated on 11/18/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59021.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 11/15/2013
Submitted Date/Time: 11/15/2013 14:10
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59021.01	MW-13-44 (11152013)	Water	11/15/2013 12:30

Analytical Laboratory Report

Lab Sample ID: S59021.01
Sample Tag: MW-13-44 (11152013)
Collected Date/Time: 11/15/2013 12:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/18/13 09:15	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/15/13 17:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/15/13 19:27	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/15/13 19:27	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/15/13 19:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/15/13 19:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/15/13 19:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	79-34-5	

Lab Sample ID: S59021.01 (continued)
Sample Tag: MW-13-44 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/15/13 19:27	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/15/13 19:27	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B0064479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: TCL VOC 1,4-dioxane SIM
59021.01 MW-13-44(11152013)	11/15/13	1230		✓	W	B		3	1	✓

REMARKS

Special Instructions/Comments:
☆ Real Time 24-hour results needed ☆

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 11/15/13 1410	Date/Time:	Date/Time:	Date/Time: 11/15/13 1410

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S59020.01(01)
Generated on 11/18/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59020.01
Project: B0064480.2013.00106/ RACER Lansing Plant 3
Collected Date: 11/15/2013
Submitted Date/Time: 11/15/2013 14:10
Sampled by: Austin Westhmis
P.O. #: B0064480.2013.00106

Report Notes

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IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59020.01	MW-13-47 (11152013)	Water	11/15/2013 13:45

Analytical Laboratory Report

Lab Sample ID: S59020.01
Sample Tag: MW-13-47 (11152013)
Collected Date/Time: 11/15/2013 13:45
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/18/13 09:10	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/15/13 17:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/15/13 19:05	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/15/13 19:05	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/15/13 19:05	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/15/13 19:05	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/15/13 19:05	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	79-34-5	

Lab Sample ID: S59020.01 (continued)
Sample Tag: MW-13-47 (11152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/15/13 19:05	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/15/13 19:05	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing Plant 3	Project #: B0064480.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: TCL VOC 1,4-dioxane SIM
59020.01 MW-13-47(11152013)	11/15/13	1345		✓	W	B		3	1	✓

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:

☆ Real Time 24-hour results needed ☆

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 11/15/13 1410	Date/Time:	Date/Time:	Date/Time: 11/15/13 1410

Analytical Laboratory Report

Report ID: S58830.01(01)
Generated on 11/07/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58830.01
Project: B0064481.2013.00106/ RACER Lansing, MI Plant 6
Collected Date: 11/05/2013
Submitted Date/Time: 11/06/2013 08:25
Sampled by: Austin Westhmis
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58830.01	MW-13-50 (85-107)	Water	11/05/2013 17:00

Analytical Laboratory Report

Lab Sample ID: S58830.01
Sample Tag: MW-13-50 (85-107)
Collected Date/Time: 11/05/2013 17:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/07/13 10:25	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/06/13 17:47	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/06/13 16:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/06/13 16:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/06/13 16:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/06/13 16:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/06/13 16:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	79-34-5	

Lab Sample ID: S58830.01 (continued)
Sample Tag: MW-13-50 (85-107)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/06/13 16:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/06/13 16:50	WAT	96-12-8	

ARCADIS
Infrastructure Water Environment Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 6	Project #: B0064481.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B
Filtered (✓)	
# of Containers	3
Container Information	1

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC	1,4-dioxane SIM	REMARKS
58830.01 MW-13-50(85-107)	11/5/13	1700		✓	W	✓		

Special Instructions/Comments:

★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.7	Date/Time: 11/6/13 0822	Date/Time:	Date/Time:	Date/Time: 11/6/13 825

Analytical Laboratory Report

Report ID: S59016.01(01)
Generated on 12/06/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59016.01-S59016.04
Project: Lansing Plant 6 Project#: B0064481.2013.
Collected Date: 11/14/2013
Submitted Date/Time: 11/15/2013 10:50
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59016.01	P6-SB-21 (111413)	Groundwater	11/14/2013 09:25
S59016.02	MW-02-01(6) (111413)	Groundwater	11/14/2013 11:25
S59016.03	MW-02-03(6) (111413)	Groundwater	11/14/2013 14:55
S59016.04	Trip Blank	Liquid	11/14/2013 07:30

Analytical Laboratory Report

Lab Sample ID: S59016.01
Sample Tag: P6-SB-21 (111413)
Collected Date/Time: 11/14/2013 09:25
Matrix: Groundwater
COC Reference: 79795

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
1	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020A	12/04/13 15:43	PER	7440-38-2	
Barium	0.025	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7440-39-3	
Boron	0.28	mg/L	0.04	SW6020A	12/04/13 15:43	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 15:43	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/04/13 15:43	PER	7439-92-1	
Manganese	0.231	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:27	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 15:43	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/04/13 15:43	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/04/13 15:43	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	91-58-7	

Lab Sample ID: S59016.01 (continued)
Sample Tag: P6-SB-21 (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 21:32	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 21:32	PL	118-74-1	

Lab Sample ID: S59016.01 (continued)
Sample Tag: P6-SB-21 (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 20:36	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 01:20	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 01:20	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 01:20	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 01:20	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 01:20	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 01:20	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	120-82-1	

Lab Sample ID: S59016.01 (continued)
Sample Tag: P6-SB-21 (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 01:20	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59016.02
Sample Tag: MW-02-01(6) (111413)
Collected Date/Time: 11/14/2013 11:25
Matrix: Groundwater
COC Reference: 79795

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
2	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7440-36-0	
Arsenic, Dissolved	0.020	mg/L	0.002	SW6020A	12/04/13 16:06	PER	7440-38-2	
Arsenic	0.037	mg/L	0.002	SW6020A	12/04/13 16:05	PER	7440-38-2	
Barium, Dissolved	1.54	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7440-39-3	
Barium	1.69	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7440-39-3	
Boron, Dissolved	0.15	mg/L	0.04	SW6020A	12/04/13 16:06	PER	7440-42-8	
Boron	0.14	mg/L	0.04	SW6020A	12/04/13 16:05	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:06	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:05	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7440-47-3	
Chromium	0.012	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7440-48-4	
Cobalt	0.005	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7440-50-8	
Copper	0.040	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 16:06	PER	7439-92-1	
Lead	0.012	mg/L	0.003	SW6020A	12/04/13 16:05	PER	7439-92-1	
Manganese, Dissolved	0.193	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7439-96-5	
Manganese	0.399	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:31	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:29	CCM	7439-97-6	
Nickel, Dissolved	0.028	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7440-02-0	
Nickel	0.039	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:06	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:05	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 16:06	PER	7440-62-2	
Vanadium	0.006	mg/L	0.004	SW6020A	12/04/13 16:05	PER	7440-62-2	
Zinc, Dissolved	0.026	mg/L	0.005	SW6020A	12/04/13 16:06	PER	7440-66-6	
Zinc	0.073	mg/L	0.005	SW6020A	12/04/13 16:05	PER	7440-66-6	

Lab Sample ID: S59016.02 (continued)
Sample Tag: MW-02-01(6) (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 22:06	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	88-75-5	

Lab Sample ID: S59016.02 (continued)
Sample Tag: MW-02-01(6) (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 22:06	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	25	ug/L	5	SW8260B - SIM	11/25/13 20:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 01:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 01:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 01:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 01:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 01:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	108-87-2	

Lab Sample ID: S59016.02 (continued)
Sample Tag: MW-02-01(6) (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 01:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 01:41	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59016.03
Sample Tag: MW-02-03(6) (111413)
Collected Date/Time: 11/14/2013 14:55
Matrix: Groundwater
COC Reference: 79795

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR
2	1L Amber	None	Yes	5.2	IR
2	125ml Plastic	HNO3	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	11/19/13 23:32	EMR		
Mercury Digestion	Completed			SW7471B	11/20/13 09:00	CCM		
Mercury Digestion	Completed			SW7471B	11/19/13 10:10	CCM		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
Metal Digestion	Completed			SW3015A	12/04/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7440-36-0	
Arsenic, Dissolved	0.046	mg/L	0.002	SW6020A	12/04/13 16:10	PER	7440-38-2	
Arsenic	0.050	mg/L	0.002	SW6020A	12/04/13 16:08	PER	7440-38-2	
Barium, Dissolved	1.13	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7440-39-3	
Barium	1.15	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020A	12/04/13 16:10	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020A	12/04/13 16:08	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:10	PER	7440-43-9	
Cadmium	0.0010	mg/L	0.0005	SW6020A	12/04/13 16:08	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7440-47-3	
Chromium	0.026	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7440-48-4	
Cobalt	0.012	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7440-50-8	
Copper	0.082	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/04/13 16:10	PER	7439-92-1	
Lead	0.026	mg/L	0.003	SW6020A	12/04/13 16:08	PER	7439-92-1	
Manganese, Dissolved	0.231	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7439-96-5	
Manganese	0.837	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	11/20/13 14:59	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	11/19/13 15:33	CCM	7439-97-6	
Nickel, Dissolved	0.071	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7440-02-0	
Nickel	0.097	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7440-02-0	
Selenium, Dissolved	0.007	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7782-49-2	
Selenium	0.006	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:10	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/04/13 16:08	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/04/13 16:10	PER	7440-62-2	
Vanadium	0.012	mg/L	0.004	SW6020A	12/04/13 16:08	PER	7440-62-2	
Zinc, Dissolved	0.027	mg/L	0.005	SW6020A	12/04/13 16:10	PER	7440-66-6	
Zinc	0.169	mg/L	0.005	SW6020A	12/04/13 16:08	PER	7440-66-6	

Lab Sample ID: S59016.03 (continued)
Sample Tag: MW-02-03(6) (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/27/13 22:40	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	11/27/13 22:40	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	88-75-5	

Lab Sample ID: S59016.03 (continued)
Sample Tag: MW-02-03(6) (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	11/27/13 22:40	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	17	ug/L	5	SW8260B - SIM	11/25/13 21:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 02:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 02:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 02:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	74-87-3	
Vinyl chloride	1	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 02:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 02:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	108-87-2	

Lab Sample ID: S59016.03 (continued)
Sample Tag: MW-02-03(6) (111413)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 02:01	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:01	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59016.04
Sample Tag: Trip Blank
Collected Date/Time: 11/14/2013 07:30
Matrix: Liquid
COC Reference: 79795

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	11/25/13 10:36	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	11/25/13 21:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	11/24/13 02:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	11/24/13 02:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	11/24/13 02:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	11/24/13 02:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	11/24/13 02:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	79-34-5	

Lab Sample ID: S59016.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	11/24/13 02:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	11/24/13 02:21	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

79795

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	ARCADIS
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810-225-1910
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	randy.christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☐ SAME
COMPANY	ARCADIS
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Lansing Plant Project#: B006448.01.2013.

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelma

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 1-4dio & 2CO	TCL SVOC	TAL metals	TAL Diss metals
39016.01	11/14	0925	P6-SB-21 (11.14.13)	GW	6	2	3	1					X	X	X	
.02	11/14	1125	MW-02-01(6) (11.14.13)	GW	7	2	3	2					X	X	X	X
.03	11/14	1455	MW-02-03(6) (11.14.13)	GW	7	2	3	2					X	X	X	X
.04	11/14	0730	TRIP BLANK	L	1		1						X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 11/14/13	TIME 1600
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/14/13	TIME 1680
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11/15/13	TIME 10:30
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 11/15/13	TIME 10:30

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 11/15/13	TIME 10:50
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 11/15/13	TIME 1050

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57635.01(01)
Generated on 09/03/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

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2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57635.01-S57635.03
Project: Plant-3 B0064480.2013.00603
Collected Date: 08/14/2013
Submitted Date/Time: 08/15/2013 09:30
Sampled by: Billy J Coson
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57635.01	MW-91-4 (08142013)	Groundwater	08/14/2013 13:20
S57635.02	MW-04-04(3) (08142013)	Groundwater	08/14/2013 15:50
S57635.03	Trip Blank	Liquid	08/14/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57635.01
Sample Tag: MW-91-4 (08142013)
Collected Date/Time: 08/14/2013 13:20
Matrix: Groundwater
COC Reference: 75287

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/16/13 11:08	LBR		
Inorganics								
Alkalinity as CaCO3	419	mg/L	1	2320B	08/16/13 09:08	JDP		
Carbon Dioxide	120	mg/L	10	4500-CO2C	08/15/13 10:47	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 08:11	JDP	14797-55-8	
Sulfate	175	mg/L	10	E300.0	08/16/13 10:56	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-36-0	
Arsenic	0.014	mg/L	0.002	SW6020	08/30/13 14:35	PER	7440-38-2	
Barium	0.099	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-39-3	
Boron	0.343	mg/L	0.04	SW6020	08/30/13 14:35	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-50-8	
Iron, Dissolved	4.93	mg/L	0.02	E200.8	08/30/13 14:41	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 14:35	PER	7439-92-1	
Manganese, Dissolved	0.356	mg/L	0.005	E200.8	08/30/13 14:41	PER	7439-96-5	
Manganese	0.356	mg/L	0.005	SW6020	08/30/13 14:35	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:29	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 14:35	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 14:35	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-62-2	
Zinc	0.007	mg/L	0.005	SW6020	08/30/13 14:35	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	92-52-4	

Lab Sample ID: S57635.01 (continued)
Sample Tag: MW-91-4 (08142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 17:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/23/13 17:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	91-20-3	

Lab Sample ID: S57635.01 (continued)
Sample Tag: MW-91-4 (08142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 17:27	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 13:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/15/13 19:22	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/15/13 19:22	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/15/13 19:22	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	74-87-3	
Vinyl chloride	10	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-34-3	
cis-1,2-Dichloroethene	19	ug/L	1	SW8260B	08/15/13 19:22	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/15/13 19:22	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/15/13 19:22	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	124-48-1	

Lab Sample ID: S57635.01 (continued)
Sample Tag: MW-91-4 (08142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/15/13 19:22	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/15/13 19:22	JGH	96-12-8	
Organics								
Methane in Water	27	ug/L	0.5	RSK-175	08/23/13 09:54	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57635.02
Sample Tag: MW-04-04(3) (08142013)
Collected Date/Time: 08/14/2013 15:50
Matrix: Groundwater
COC Reference: 75287

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/16/13 11:13	LBR		
Inorganics								
Alkalinity as CaCO3	384	mg/L	1	2320B	08/16/13 09:12	JDP		
Carbon Dioxide	119	mg/L	10	4500-CO2C	08/15/13 10:53	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 08:22	JDP	14797-55-8	
Sulfate	180	mg/L	10	E300.0	08/16/13 11:07	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-36-0	
Arsenic	0.012	mg/L	0.002	SW6020	08/30/13 14:43	PER	7440-38-2	
Barium	0.087	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-39-3	
Boron	0.329	mg/L	0.04	SW6020	08/30/13 14:43	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-48-4	
Copper	0.010	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-50-8	
Iron, Dissolved	4.13	mg/L	0.02	E200.8	08/30/13 14:44	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 14:43	PER	7439-92-1	
Manganese, Dissolved	0.444	mg/L	0.005	E200.8	08/30/13 14:44	PER	7439-96-5	
Manganese	0.446	mg/L	0.005	SW6020	08/30/13 14:43	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:31	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 14:43	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 14:43	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	08/30/13 14:43	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	92-52-4	

Lab Sample ID: S57635.02 (continued)
Sample Tag: MW-04-04(3) (08142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 14:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/22/13 14:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	91-20-3	

Lab Sample ID: S57635.02 (continued)
Sample Tag: MW-04-04(3) (08142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 14:20	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 14:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/15/13 19:43	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/15/13 19:43	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/15/13 19:43	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	74-87-3	
Vinyl chloride	4	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-34-3	
cis-1,2-Dichloroethene	4	ug/L	1	SW8260B	08/15/13 19:43	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/15/13 19:43	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/15/13 19:43	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	124-48-1	

Lab Sample ID: S57635.02 (continued)
Sample Tag: MW-04-04(3) (08142013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/15/13 19:43	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/15/13 19:43	JGH	96-12-8	
Organics								
Methane in Water	23	ug/L	0.5	RSK-175	08/23/13 10:41	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57635.03
Sample Tag: Trip Blank
Collected Date/Time: 08/14/2013 00:01
Matrix: Liquid
COC Reference: 75287

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/19/13 10:21	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 14:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/16/13 15:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/16/13 15:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/16/13 15:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/16/13 15:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/16/13 15:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	79-34-5	

Lab Sample ID: S57635.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/16/13 15:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/16/13 15:59	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75287

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8837 P.O. NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: PLANT-3 B0064480.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COSEN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 14-D SIMS	TCL SVOC	TAL METALS	DISSOLVED Fe, Mn	SULFATE, NITRATE, CO2 + ALKALINITY	METHANE				
57635.01	8/14/13	13:20	MW-91-4 (08142013)	GW	11	3	6	2					3	2	1	1	1	3				
.02	8/14/13	15:50	MW-04-04(3) (08142013)	GW	11	3	6	2					3	2	1	1	1	3				
.03	8/14/13	—	Trip Blank	L	2		2						X	X								

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ARCADIS ☒ Sampler DATE: 8/14/13 TIME: 18:25
RECEIVED BY: SIGNATURE/ORGANIZATION: CLIFF WALLS PME DATE: 8/14/13 TIME: 18:25

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 8.15.13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8/15/13 TIME: 930

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 8/14/13 TIME: 19:00
RECEIVED BY: SIGNATURE/ORGANIZATION: PME STORAGE DATE: 8/14/13 TIME: 19:00

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

August 27, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308300	08/16/2013	S57635

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308300**
Project:	Subcontract Lab Services	Description:	S57635
Client Sample ID:	**57635.01**	Sampled:	08/14/13 13:20
Lab Sample ID:	**1308300-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**27**	0.50	ug/L	1	RSK-175	08/23/13 09:54	JMF	1308807

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308300**
Project:	Subcontract Lab Services	Description:	S57635
Client Sample ID:	**57635.02**	Sampled:	08/14/13 15:50
Lab Sample ID:	**1308300-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**23**	0.50	ug/L	1	RSK-175	08/23/13 10:41	JMF	1308807

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308807 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane		33.0	**27.8**	84	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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E: 1308300

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

17-9
75317

736 White

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: S57635
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/14	1320	57635.01	GW	3		X						X	
02	↓	1550	57635.02	↓	↓		X						X	
														*Subcd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/15/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5838 3340 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Trimatrix DATE: 8/16/13 TIME: 1015
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308300
Receipt Record Page/Line #: 7-9 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): [illegible] 8/16/13 | ☒ Cooler ☐ Box ☐ Other | Qty Received: 1 | ☒ IR Gun (#202) | Thermometer Used ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Client	1138	☒ None ☐ Present / Intact ☐ Present / Not Intact	~~Dispersed~~ / Top / Middle / Bottom	☒ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Client	Temp Blank:		
	TB location: Representative / Not Representative		
	1 4.8	-	4.8
	2 4.0	-	4.0
	3 4.2	-	4.2
	Average °C		4.3
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☒	☐	Chain of Custody record(s)? If No, Initiated By _____
☒		Received for Lab Signed/Date/Time?
☒	☐	Shipping document?
☐	☒	Other _____

COC Information

☐ TriMatrix COC ☒ Other _____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☒	☐	Analysis Requested?
☒	☐	Sample ID matches COC?
☒	☐	Sample Date and Time matches COC?
☒		Container type completed on COC?
☒	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☒	Broken containers/lids?
	☐	☒	Missing or incomplete labels?
	☐	☒	Illegible information on labels?
	☐	☒	Low volume received?
	☐	☒	Inappropriate or non-TriMatrix containers received?
☐	☐	☒	VOC vials / TOX containers have headspace?
☒	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☒	☐	Average sample temperature ≤6° C?
☒	☐	☐	Was thermal preservation required?
☒	☐		If "No", Project Chemist Approval Intials: _____
☒	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☒	☐		Completed Sample Preservation Verification Form?
☒	☐	☐	Samples chemically preserved correctly?
☒	☐		If "No", added orange tag?
	☐	☒	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☒ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/16/13 1015	8/16/13 1146	Yes / No

Log In Forms - Receiving Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57636.01(01)
Generated on 09/03/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57636.01-S57636.07
Project: Plant 6/ B0064480.2013.00603
Collected Date: 08/14/2013
Submitted Date/Time: 08/15/2013 09:30
Sampled by: Steve Stelter
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57636.01	MW-12-03	Groundwater	08/14/2013 10:46
S57636.02	MW-12-10	Groundwater	08/14/2013 12:46
S57636.03	MW-04-05	Groundwater	08/14/2013 15:35
S57636.04	MW-12-11	Groundwater	08/14/2013 17:50
S57636.05	DUP #1	Groundwater	08/14/2013 00:01
S57636.06	EQ #1	Liquid	08/14/2013 18:22
S57636.07	Trip Blank	Liquid	08/14/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S57636.01
Sample Tag: MW-12-03
Collected Date/Time: 08/14/2013 10:46
Matrix: Groundwater
COC Reference: 75299

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 10:21	LBR		
Inorganics								
Alkalinity as CaCO3	400	mg/L	1	2320B	08/16/13 09:16	JDP		
Carbon Dioxide	206	mg/L	10	4500-CO2C	08/15/13 10:33	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 08:34	JDP	14797-55-8	
Sulfate	559	mg/L	50	E300.0	08/16/13 11:19	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	08/30/13 14:46	PER	7440-38-2	
Barium	0.151	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	08/30/13 14:46	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-50-8	
Iron, Dissolved	2.12	mg/L	0.02	E200.8	08/30/13 14:48	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 14:46	PER	7439-92-1	
Manganese, Dissolved	1.26	mg/L	0.005	E200.8	08/30/13 14:48	PER	7439-96-5	
Manganese	1.23	mg/L	0.005	SW6020	08/30/13 14:46	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:32	CCM	7439-97-6	
Nickel	0.025	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 14:46	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 14:46	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	08/30/13 14:46	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	92-52-4	

Lab Sample ID: S57636.01 (continued)
Sample Tag: MW-12-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 14:54	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/22/13 14:54	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	91-20-3	

Lab Sample ID: S57636.01 (continued)
Sample Tag: MW-12-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 14:54	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 14:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/16/13 16:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/16/13 16:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/16/13 16:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/16/13 16:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/16/13 16:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	124-48-1	

Lab Sample ID: S57636.01 (continued)
Sample Tag: MW-12-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/16/13 16:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/16/13 16:19	WAT	96-12-8	
Organics								
Methane in Water	16	ug/L	0.5	RSK-175	08/23/13 10:47	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57636.02
Sample Tag: MW-12-10
Collected Date/Time: 08/14/2013 12:46
Matrix: Groundwater
COC Reference: 75299

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 10:21	LBR		
Inorganics								
Alkalinity as CaCO3	494	mg/L	1	2320B	08/16/13 09:18	JDP		
Carbon Dioxide	184	mg/L	10	4500-CO2C	08/15/13 10:35	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 08:45	JDP	14797-55-8	
Sulfate	49	mg/L	5	E300.0	08/16/13 08:45	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	08/30/13 14:57	PER	7440-38-2	
Barium	0.133	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-39-3	
Boron	0.088	mg/L	0.04	SW6020	08/30/13 14:57	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-48-4	
Copper	0.005	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-50-8	
Iron, Dissolved	0.876	mg/L	0.02	E200.8	08/30/13 14:58	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 14:57	PER	7439-92-1	
Manganese, Dissolved	0.607	mg/L	0.005	E200.8	08/30/13 14:58	PER	7439-96-5	
Manganese	0.618	mg/L	0.005	SW6020	08/30/13 14:57	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:34	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 14:57	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 14:57	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020	08/30/13 14:57	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	92-52-4	

Lab Sample ID: S57636.02 (continued)
Sample Tag: MW-12-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 15:29	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/22/13 15:29	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/22/13 15:29	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	91-20-3	

Lab Sample ID: S57636.02 (continued)
Sample Tag: MW-12-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 15:29	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 15:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/16/13 16:40	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/16/13 16:40	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/16/13 16:40	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/16/13 16:40	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/16/13 16:40	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	124-48-1	

Lab Sample ID: S57636.02 (continued)
Sample Tag: MW-12-10

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/16/13 16:40	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/16/13 16:40	WAT	96-12-8	
Organics								
Methane in Water	100	ug/L	2.0	RSK-175	08/23/13 10:57	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57636.03
Sample Tag: MW-04-05
Collected Date/Time: 08/14/2013 15:35
Matrix: Groundwater
COC Reference: 75299

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
3	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 10:21	LBR		
Inorganics								
Alkalinity as CaCO3	504	mg/L	1	2320B	08/16/13 09:20	JDP		
Carbon Dioxide	188	mg/L	10	4500-CO2C	08/15/13 10:37	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 08:57	JDP	14797-55-8	
Sulfate	126	mg/L	5	E300.0	08/16/13 08:57	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-36-0	
Arsenic, Dissolved	0.007	mg/L	0.002	SW6020	08/30/13 15:05	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020	08/30/13 15:02	PER	7440-38-2	
Barium, Dissolved	0.900	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-39-3	
Barium	0.841	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-39-3	
Boron, Dissolved	0.096	mg/L	0.04	SW6020	08/30/13 15:05	PER	7440-42-8	
Boron	0.096	mg/L	0.04	SW6020	08/30/13 15:02	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-50-8	
Iron, Dissolved	6.64	mg/L	0.02	E200.8	08/30/13 15:05	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	08/30/13 15:05	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 15:02	PER	7439-92-1	
Manganese, Dissolved	0.422	mg/L	0.005	SW6020	08/30/13 15:05	PER	7439-96-5	
Manganese	0.422	mg/L	0.005	SW6020	08/30/13 15:02	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:38	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:36	CCM	7439-97-6	
Nickel, Dissolved	0.027	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-02-0	
Nickel	0.026	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-02-0	
Selenium, Dissolved	0.009	mg/L	0.005	SW6020	08/30/13 15:05	PER	7782-49-2	

Lab Sample ID: S57636.03 (continued)
Sample Tag: MW-04-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	0.012	mg/L	0.005	SW6020	08/30/13 15:02	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	08/30/13 15:05	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 15:02	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 15:05	PER	7440-66-6	
Zinc	0.007	mg/L	0.005	SW6020	08/30/13 15:02	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 16:03	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/22/13 16:03	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	08/22/13 16:03	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	87-68-3	

Lab Sample ID: S57636.03 (continued)
Sample Tag: MW-04-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 16:03	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 15:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/16/13 17:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/16/13 17:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/16/13 17:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	110-82-7	

Lab Sample ID: S57636.03 (continued)
Sample Tag: MW-04-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/16/13 17:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/16/13 17:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/16/13 17:01	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/16/13 17:01	WAT	96-12-8	
Organics								
Methane in Water	200	ug/L	2.5	RSK-175	08/23/13 11:07	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57636.04
Sample Tag: MW-12-11
Collected Date/Time: 08/14/2013 17:50
Matrix: Groundwater
COC Reference: 75299

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 10:21	LBR		
Inorganics								
Alkalinity as CaCO3	380	mg/L	1	2320B	08/16/13 09:22	JDP		
Carbon Dioxide	200	mg/L	10	4500-CO2C	08/15/13 10:39	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 09:09	JDP	14797-55-8	
Sulfate	234	mg/L	10	E300.0	08/16/13 11:30	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-36-0	
Arsenic	0.013	mg/L	0.002	SW6020	08/30/13 15:23	PER	7440-38-2	
Barium	0.104	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	08/30/13 15:23	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-43-9	
Chromium	0.005	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-50-8	
Iron, Dissolved	12.5	mg/L	0.02	E200.8	08/30/13 15:25	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 15:23	PER	7439-92-1	
Manganese, Dissolved	0.838	mg/L	0.005	E200.8	08/30/13 15:25	PER	7439-96-5	
Manganese	0.856	mg/L	0.005	SW6020	08/30/13 15:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:40	CCM	7439-97-6	
Nickel	0.034	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-02-0	
Selenium	0.014	mg/L	0.005	SW6020	08/30/13 15:23	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 15:23	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	08/30/13 15:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	92-52-4	

Lab Sample ID: S57636.04 (continued)
Sample Tag: MW-12-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 16:37	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	84-66-2	
Dimethyl phthalate	12	ug/L	1	SW8270C	08/22/13 16:37	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/22/13 16:37	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	91-20-3	

Lab Sample ID: S57636.04 (continued)
Sample Tag: MW-12-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 16:37	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 15:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/16/13 17:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/16/13 17:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/16/13 17:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/16/13 17:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/16/13 17:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	124-48-1	

Lab Sample ID: S57636.04 (continued)
Sample Tag: MW-12-11

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/16/13 17:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/16/13 17:22	WAT	96-12-8	
Organics								
Methane in Water	15	ug/L	0.5	RSK-175	08/23/13 11:11	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57636.05
Sample Tag: DUP #1
Collected Date/Time: 08/14/2013 00:01
Matrix: Groundwater
COC Reference: 75299

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 10:21	LBR		
Inorganics								
Alkalinity as CaCO3	504	mg/L	1	2320B	08/16/13 09:24	JDP		
Carbon Dioxide	178	mg/L	10	4500-CO2C	08/15/13 10:41	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 09:20	JDP	14797-55-8	
Sulfate	49	mg/L	5	E300.0	08/16/13 09:20	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	08/30/13 15:27	PER	7440-38-2	
Barium	0.131	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-39-3	
Boron	0.094	mg/L	0.04	SW6020	08/30/13 15:27	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-48-4	
Copper	0.035	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-50-8	
Iron, Dissolved	0.983	mg/L	0.02	E200.8	08/30/13 15:28	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 15:27	PER	7439-92-1	
Manganese, Dissolved	0.614	mg/L	0.005	E200.8	08/30/13 15:28	PER	7439-96-5	
Manganese	0.604	mg/L	0.005	SW6020	08/30/13 15:27	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:42	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 15:27	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 15:27	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020	08/30/13 15:27	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	92-52-4	

Lab Sample ID: S57636.05 (continued)
Sample Tag: DUP #1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 17:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/22/13 17:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	91-20-3	

Lab Sample ID: S57636.05 (continued)
Sample Tag: DUP #1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 17:12	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 15:57	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/16/13 17:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/16/13 17:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/16/13 17:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/16/13 17:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/16/13 17:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	124-48-1	

Lab Sample ID: S57636.05 (continued)
Sample Tag: DUP #1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/16/13 17:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/16/13 17:43	WAT	96-12-8	
Organics								
Methane in Water	70	ug/L	1.0	RSK-175	08/23/13 11:18	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57636.06
Sample Tag: EQ #1
Collected Date/Time: 08/14/2013 18:22
Matrix: Liquid
COC Reference: 75299

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 10:21	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	08/30/13 15:32	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	08/30/13 15:32	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 15:32	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:44	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 15:32	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	08/30/13 15:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	91-58-7	

Lab Sample ID: S57636.06 (continued)
Sample Tag: EQ #1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 17:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/22/13 17:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 17:46	PL	118-74-1	

Lab Sample ID: S57636.06 (continued)
Sample Tag: EQ #1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 16:15	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/16/13 18:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/16/13 18:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/16/13 18:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/16/13 18:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/16/13 18:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/16/13 18:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	120-82-1	

Lab Sample ID: S57636.06 (continued)
Sample Tag: EQ #1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/16/13 18:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57636.07
Sample Tag: Trip Blank
Collected Date/Time: 08/14/2013 08:00
Matrix: Liquid
COC Reference: 75299

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/19/13 10:21	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 16:33	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/16/13 18:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/16/13 18:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/16/13 18:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/16/13 18:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/16/13 18:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	79-34-5	

Lab Sample ID: S57636.07 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/16/13 18:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/16/13 18:24	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75299

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE Suite 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810 229 8837 P.O. NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: PLANT 6 / B006448.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE STELTER

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☒ ~~Detroit~~ LANSING ☒ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1,4-D	TCL SVOC's	TAL METALS	Dissolved Fe, Mn	Sulfate, Nitrate, Coz	Ammonia, Alkalinity	Methane	DISSOLVED METALS
57636.01	8/14	1046	MW-12-03	GW	11	3	6	2					X	X	X	X	X	X	X	
.02	8/14	1246	MW-12-10	GW	11	3	6	2					X	X	X	X	X	X	X	
.03	8/14	1535	MW-04-05	GW	12	3	6	3					X	X	X	X	X	X	X	X
.04	8/14	1750	MW-12-11	GW	11	3	6	2					X	X	X	X	X	X	X	
.05	8/14	/	Dup #1	GW	11	3	6	2					X	X	X	X	X	X	X	
.06	8/14	1822	EQ #1	L	6	2	3	1					X	X	X	~~X~~	~~X~~	~~X~~	~~X~~	LR 8-15-13
.07	8/13	0800	TRIP BLANK	L	1		1						X							(SS)

SS

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Steve Stelter ☒ Sampler PM	DATE	TIME
		8/14/13	1900
RECEIVED BY: SIGNATURE/ORGANIZATION	PM STORAGE	DATE	TIME
		8/14/13	1900
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		8-15-13	855

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8-15-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Rent MEA	DATE	TIME
		8/16/13	930

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

August 27, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308301	08/16/2013	S57636

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308301**
Project:	Subcontract Lab Services	Description:	S57636
Client Sample ID:	**57636.01**	Sampled:	08/14/13 10:46
Lab Sample ID:	**1308301-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**16**	0.50	ug/L	1	RSK-175	08/23/13 10:47	JMF	1308807

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308301**
Project:	Subcontract Lab Services	Description:	S57636
Client Sample ID:	**57636.02**	Sampled:	08/14/13 12:46
Lab Sample ID:	**1308301-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**100**	2.0	ug/L	4	RSK-175	08/23/13 10:57	JMF	1308807

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308301**
Project:	Subcontract Lab Services	Description:	S57636
Client Sample ID:	**57636.03**	Sampled:	08/14/13 15:35
Lab Sample ID:	**1308301-03**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**200**	2.5	ug/L	5	RSK-175	08/23/13 11:07	JMF	1308807

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308301**
Project:	Subcontract Lab Services	Description:	S57636
Client Sample ID:	**57636.04**	Sampled:	08/14/13 17:50
Lab Sample ID:	**1308301-04**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**15**	0.50	ug/L	1	RSK-175	08/23/13 11:11	JMF	1308807

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308301**
Project:	Subcontract Lab Services	Description:	S57636
Client Sample ID:	**57636.05**	Sampled:	08/14/13 00:00
Lab Sample ID:	**1308301-05**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**70**	1.0	ug/L	2	RSK-175	08/23/13 11:18	JMF	1308807

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308807 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane		33.0	**27.8**	84	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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E: 1308301

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

17-10
75318

143 White

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 57636. SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/14	1046	57636.01	GW	3		X						X	
02	↓	1246	57636.02	↓	↓		↓						↓	
03		1535	57636.03											*Subct to Trimatrix
04		1750	57636.04											
05	↓	—	57636.05											

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/15/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z466 477 03 5838 3340 DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Lisa Romeyn Trimatrix DATE: 8/16/13 TIME: 1015
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308301
Receipt Record Page/Line #: 17-10 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): [illegible] 8/16/13
☒ Cooler ☐ Box ☐ Other ____ | Qty Received: 1
Thermometer Used: ☒ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time
Client	1138						

Custody Seals:
- Cooler #: ☒ None ☐ Present / Intact ☐ Present / Not Intact
- Cooler #: ☐ None ☐ Present / Intact ☐ Present / Not Intact
- Cooler #: ☐ None ☐ Present / Intact ☐ Present / Not Intact
- Cooler #: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location:
- Cooler #: (Dispersed) / Top / Middle / Bottom
- Cooler #: Dispersed / Top / Middle / Bottom
- Cooler #: Dispersed / Top / Middle / Bottom
- Cooler #: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- Cooler #: ☒ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
- Cooler #: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
- Cooler #: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
- Cooler #: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- Cooler #: ☐ Temperature Blank (TB) ☐ 1 Container
- Cooler #: ☐ Temperature Blank (TB) ☐ 1 Container
- Cooler #: ☐ Temperature Blank (TB) ☐ 1 Container
- Cooler #: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1 4.8	−	4.8
2 4.0	−	4.0
3 4.2	−	4.2
Average °C		4.3
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☒	☐	Chain of Custody record(s)? If No, Initiated By ____
☒	☐	Received for Lab Signed/Date/Time?
☒	☐	Shipping document?
☐	☒	Other ____

COC Information

☐ TriMatrix COC ☒ Other ____

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☒	☐	Average sample temperature ≤6° C?
☒	☐	☐	Was thermal preservation required?
☒	☐	☐	If "No", Project Chemist Approval Intials: ____
☒	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☒	☐	☐	Completed Sample Preservation Verification Form?
☒	☐	☐	Samples chemically preserved correctly?
☒	☐	☐	If "No", added orange tag?
	☐	☒	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☒	☐	Analysis Requested?
☒	☐	Sample ID matches COC?
☒	☐	Sample Date and Time matches COC?
☒	☐	Container type completed on COC?
☒	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☒ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☒	Broken containers/lids?
	☐	☒	Missing or incomplete labels?
	☐	☒	Illegible information on labels?
	☐	☒	Low volume received?
	☐	☒	Inappropriate or non-TriMatrix containers received?
☐	☐	☒	VOC vials / TOX containers have headspace?
☒	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/16/13 1015	8/16/13 1146	Yes (No)

Log In Forms - Receiving.Log-In_Checklist revision: 3.4

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Analytical Laboratory Report

Report ID: S57637.01(01)
Generated on 09/03/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57637.01-S57637.04
Project: Plant 2 B0064479.2013.00603
Collected Date: 08/14/2013
Submitted Date/Time: 08/15/2013 09:30
Sampled by: Cliff Walls
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57637.01	MW-12-02	Groundwater	08/14/2013 10:45
S57637.02	P2-MW-01	Groundwater	08/14/2013 14:32
S57637.03	P2-MW-04	Groundwater	08/14/2013 17:05
S57637.04	Trip Blank	Liquid	08/14/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57637.01
Sample Tag: MW-12-02
Collected Date/Time: 08/14/2013 10:45
Matrix: Groundwater
COC Reference: 75300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:32	WAT		
Inorganics								
Alkalinity as CaCO3	408	mg/L	1	2320B	08/16/13 09:26	JDP		
Carbon Dioxide	140	mg/L	10	4500-CO2C	08/15/13 10:43	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 09:32	JDP	14797-55-8	
Sulfate	142	mg/L	10	E300.0	08/16/13 11:42	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-36-0	
Arsenic	0.013	mg/L	0.002	SW6020	08/30/13 15:34	PER	7440-38-2	
Barium	0.219	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-39-3	
Boron	0.071	mg/L	0.04	SW6020	08/30/13 15:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-50-8	
Iron, Dissolved	5.45	mg/L	0.02	E200.8	08/30/13 15:35	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 15:34	PER	7439-92-1	
Manganese, Dissolved	0.125	mg/L	0.005	E200.8	08/30/13 15:35	PER	7439-96-5	
Manganese	0.127	mg/L	0.005	SW6020	08/30/13 15:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:46	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 15:34	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 15:34	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-62-2	
Zinc	0.016	mg/L	0.005	SW6020	08/30/13 15:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	92-52-4	

Lab Sample ID: S57637.01 (continued)
Sample Tag: MW-12-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 18:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	84-66-2	
Dimethyl phthalate	9	ug/L	1	SW8270C	08/22/13 18:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	91-20-3	

Lab Sample ID: S57637.01 (continued)
Sample Tag: MW-12-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 18:20	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 16:51	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 15:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 15:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 15:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 15:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 15:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	124-48-1	

Lab Sample ID: S57637.01 (continued)
Sample Tag: MW-12-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 15:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 15:48	WAT	96-12-8	
Organics								
Methane in Water	17	ug/L	0.5	RSK-175	08/23/13 09:11	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57637.02
Sample Tag: P2-MW-01
Collected Date/Time: 08/14/2013 14:32
Matrix: Groundwater
COC Reference: 75300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:32	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020	08/30/13 15:37	PER	7440-38-2	
Barium	1.11	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-39-3	
Boron	0.041	mg/L	0.04	SW6020	08/30/13 15:37	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 15:37	PER	7439-92-1	
Manganese	0.200	mg/L	0.005	SW6020	08/30/13 15:37	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:56	CCM	7439-97-6	
Nickel	0.026	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 15:37	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 15:37	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-62-2	
Zinc	0.023	mg/L	0.005	SW6020	08/30/13 15:37	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	91-58-7	

Lab Sample ID: S57637.02 (continued)
Sample Tag: P2-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 18:54	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	84-66-2	
Dimethyl phthalate	10	ug/L	1	SW8270C	08/22/13 18:54	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 18:54	PL	118-74-1	

Lab Sample ID: S57637.02 (continued)
Sample Tag: P2-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 17:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 16:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 16:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 16:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 16:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 16:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 16:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	120-82-1	

Lab Sample ID: S57637.02 (continued)
Sample Tag: P2-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 16:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57637.03
Sample Tag: P2-MW-04
Collected Date/Time: 08/14/2013 17:05
Matrix: Groundwater
COC Reference: 75300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
Metal Digestion	Completed			3015A	08/30/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	357	mg/L	1	2320B	08/16/13 09:28	JDP		
Carbon Dioxide	131	mg/L	10	4500-CO2C	08/15/13 10:45	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 09:43	JDP	14797-55-8	
Sulfate	341	mg/L	50	E300.0	08/16/13 11:53	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020	08/30/13 15:39	PER	7440-38-2	
Barium	0.249	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-39-3	
Boron	0.544	mg/L	0.04	SW6020	08/30/13 15:39	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-48-4	
Copper	0.009	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-50-8	
Iron, Dissolved	4.34	mg/L	0.02	E200.8	08/30/13 15:43	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 15:39	PER	7439-92-1	
Manganese, Dissolved	0.150	mg/L	0.005	E200.8	08/30/13 15:43	PER	7439-96-5	
Manganese	0.157	mg/L	0.005	SW6020	08/30/13 15:39	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 15:58	CCM	7439-97-6	
Nickel	0.026	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 15:39	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 15:39	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-62-2	
Zinc	0.018	mg/L	0.005	SW6020	08/30/13 15:39	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	92-52-4	

Lab Sample ID: S57637.03 (continued)
Sample Tag: P2-MW-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 19:29	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/22/13 19:29	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/22/13 19:29	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	91-20-3	

Lab Sample ID: S57637.03 (continued)
Sample Tag: P2-MW-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 19:29	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	54	ug/L	5	SW8260B - SIM	08/16/13 17:27	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 16:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 16:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 16:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 16:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 16:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	124-48-1	

Lab Sample ID: S57637.03 (continued)
Sample Tag: P2-MW-04

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 16:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 16:30	WAT	96-12-8	
Organics								
Methane in Water	150	ug/L	2.0	RSK-175	08/23/13 09:34	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57637.04
Sample Tag: Trip Blank
Collected Date/Time: 08/14/2013 00:01
Matrix: Liquid
COC Reference: 75300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:32	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 17:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 16:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 16:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 16:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 16:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 16:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	79-34-5	

Lab Sample ID: S57637.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 16:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 16:50	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75300

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lake Rogers
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229-8594 FAX NO.: 810 229-8537 P.O. NO.:
E-MAIL ADDRESS: Lake.Rogers@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: PLANT 2 B0064479.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wills

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 1,4-D MS/SD	TCL SVOCs	TAL Metals	Methane Miss Ferm	Sul, Nit, Alk, Cos				
576371.01	8-14-13	10:45	MW-12-02	GW	11	3	6	2					X	X	X	X	X	X				
.02	8-14-13	14:32	P2-MW-01	GW	6	2	3	1					X	X	X							
.03	8-14-13	17:05	P2-MW-04	GW	11	3	6	2					X	X	X	X	X	X				
.04	8-14-13	—	Trip Blank	L	2		2						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
Cliff Wills		8-14-13	19:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
PME Storage		8-14-13	19:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
MD		8-15-13	855

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Mes	8-15-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Talaitha Faust	8-15-13	920
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

August 27, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308296	08/16/2013	S57637

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308296**
Project:	Subcontract Lab Services	Description:	S57637
Client Sample ID:	**57637.01**	Sampled:	08/14/13 10:45
Lab Sample ID:	**1308296-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**17**	0.50	ug/L	1	RSK-175	08/23/13 09:11	JMF	1308807

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308296**
Project:	Subcontract Lab Services	Description:	S57637
Client Sample ID:	**57637.03**	Sampled:	08/14/13 17:05
Lab Sample ID:	**1308296-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**150**	2.0	ug/L	4	RSK-175	08/23/13 09:34	JMF	1308807

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308807 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane		33.0	**27.8**	84	70-116	--		0.50
Matrix Spike 1308296-01 57637.01					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane	17.3	33.0	**38.9**	65	42-112	--		0.50
Matrix Spike Duplicate 1308296-01 57637.01					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane	17.3	33.0	**39.4**	67	42-112	1	20	0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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E 1308296

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

17-11
75319

498 White

CHAIN OF CUSTODY RECORD

REPORT TO		INVOICE TO	
CONTACT NAME	Tabitha Faust	CONTACT NAME	Julie Teague
		X SAME	
COMPANY	Merit Labs	COMPANY	
ADDRESS		ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
PHONE NO. / FAX NO. / P.O. NO.		PHONE NO. / E-MAIL ADDRESS	
E-MAIL ADDRESS / QUOTE NO.			

PROJECT NO./NAME: 57637

SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO3	H2SO4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/14	1045	57637.01	gw	3		x						x	Sub'd to
02	↓	1705	57637.03	↓	3		x						x	*Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Tabitha Faust ☐ Sampler	DATE 8/15/13	TIME 1600
RECEIVED BY: SIGNATURE/ORGANIZATION	1Z 466477 03 5838 3340	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Trimatrix	DATE 8/16/13	TIME 1015
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS

SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS

NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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Individual sample results relate only to the sample tested.

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308296
Receipt Record Page/Line #: 17-11 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): 8/16/13

Cooler / Box / Other | Qty Received: 1

Thermometer Used: IR Gun (#202) / Digital Thermometer (#54) / Other (#_____) | See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Client	1138	None / Present / Intact / Present / Not Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Bagged Ice / Blue Ice / None — Avg 2-3 containers	Temperature Blank (TB) / 1 Container
		None / Present / Intact / Present / Not Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Bagged Ice / Blue Ice / None — Avg 2-3 containers	Temperature Blank (TB) / 1 Container
		None / Present / Intact / Present / Not Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Bagged Ice / Blue Ice / None — Avg 2-3 containers	Temperature Blank (TB) / 1 Container
		None / Present / Intact / Present / Not Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Bagged Ice / Blue Ice / None — Avg 2-3 containers	Temperature Blank (TB) / 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank			
TB location: Representative / Not Representative			
1	4.8	−	4.8
2	4.0	−	4.0
3	4.2	−	4.2
Average °C			4.3

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

Cooler ID on COC? / VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤8° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Initials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
☑	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/16/13 1015	8/16/13 1146	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist revision: 3.4

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

Analytical Laboratory Report

Report ID: S57640.01(01)
Generated on 09/03/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57640.01-S57640.03
Project: Plant 6/ B0064480.2013.00603
Collected Date: 08/15/2013
Submitted Date/Time: 08/15/2013 13:20
Sampled by: Steve Stelter
P.O. #: B0064480.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57640.01	MW-03-01	Groundwater	08/15/2013 09:50
S57640.02	MW-03-02	Groundwater	08/15/2013 11:30
S57640.03	Trip Blank	Liquid	08/15/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S57640.01
Sample Tag: MW-03-01
Collected Date/Time: 08/15/2013 09:50
Matrix: Groundwater
COC Reference: 75306

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:32	WAT		
Inorganics								
Alkalinity as CaCO3	325	mg/L	1	2320B	08/16/13 09:30	JDP		
Carbon Dioxide	198	mg/L	10	4500-CO2C	08/15/13 14:25	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 09:55	JDP	14797-55-8	
Sulfate	129	mg/L	10	E300.0	08/16/13 12:05	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-36-0	
Arsenic	0.018	mg/L	0.002	SW6020	08/30/13 16:13	PER	7440-38-2	
Barium	0.370	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	08/30/13 16:13	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-50-8	
Iron, Dissolved	14.4	mg/L	0.02	E200.8	08/30/13 16:17	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 16:13	PER	7439-92-1	
Manganese, Dissolved	0.203	mg/L	0.005	E200.8	08/30/13 16:17	PER	7439-96-5	
Manganese	0.207	mg/L	0.005	SW6020	08/30/13 16:13	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 16:12	CCM	7439-97-6	
Nickel	0.046	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-02-0	
Selenium	0.013	mg/L	0.005	SW6020	08/30/13 16:13	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 16:13	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-62-2	
Zinc	0.026	mg/L	0.005	SW6020	08/30/13 16:13	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	92-52-4	

Lab Sample ID: S57640.01 (continued)
Sample Tag: MW-03-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 20:03	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/22/13 20:03	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	91-20-3	

Lab Sample ID: S57640.01 (continued)
Sample Tag: MW-03-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 20:03	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 18:04	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 17:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 17:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 17:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 17:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 17:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	124-48-1	

Lab Sample ID: S57640.01 (continued)
Sample Tag: MW-03-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 17:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 17:11	WAT	96-12-8	
Organics								
Methane in Water	170	ug/L	2.0	RSK-175	08/23/13 09:47	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57640.02
Sample Tag: MW-03-02
Collected Date/Time: 08/15/2013 11:30
Matrix: Groundwater
COC Reference: 75306

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/20/13 23:34	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 11:30	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:32	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-36-0	
Arsenic	0.018	mg/L	0.002	SW6020	08/30/13 16:18	PER	7440-38-2	
Barium	0.567	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-39-3	
Boron	0.044	mg/L	0.04	SW6020	08/30/13 16:18	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 16:18	PER	7439-92-1	
Manganese	0.154	mg/L	0.005	SW6020	08/30/13 16:18	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 16:26	CCM	7439-97-6	
Nickel	0.029	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-02-0	
Selenium	0.013	mg/L	0.005	SW6020	08/30/13 16:18	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 16:18	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020	08/30/13 16:18	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	85-68-7	

Lab Sample ID: S57640.02 (continued)
Sample Tag: MW-03-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/22/13 20:37	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/22/13 20:37	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/22/13 20:37	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/22/13 20:37	PL	118-74-1	

Lab Sample ID: S57640.02 (continued)
Sample Tag: MW-03-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 18:22	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 17:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 17:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 17:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 17:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 17:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 17:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	120-82-1	

Lab Sample ID: S57640.02 (continued)
Sample Tag: MW-03-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 17:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57640.03
Sample Tag: Trip Blank
Collected Date/Time: 08/15/2013 08:00
Matrix: Liquid
COC Reference: 75306

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:32	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/16/13 18:40	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 17:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 17:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 17:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 17:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 17:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	79-34-5	

Lab Sample ID: S57640.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 17:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 17:53	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

75306

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810 229 8837
E-MAIL ADDRESS: LANCE.ROGERS@ARCADISUS.COM
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Mont 6 / B006448012013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE STELTER

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
X Kalamazoo ~~☐ Detroit~~ ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 4+D	TCL SVOC's	TAL Metals	Dissolved Fe, Mn	Sulfate, Nitrate, Cl2	ALKalinity	methane	Diss Metals	Special Instructions
57640.01	8/15	0950	MW-03-01	GW	11	3	6	2					X	X	X	X	X	X	X		
.02	8/15	1130	MW-03-02	GW	11	3	6	2					X	X	X		~~X~~	~~X~~	~~X~~		NO (SS)
.03	8/13	0800	TRIP BLANK	L	1		1						X								
													SS								

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Steve Stelter PME X Sampler	8/15/13	1202
RECEIVED BY: SIGNATURE/ORGANIZATION	Timbless MERIT	8/15/13	1202
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	MEM	8-15-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	Tahnton Faust	DATE 8-15-13	TIME 1326

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 0.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

August 27, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308298	08/16/2013	S57640

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308298**
Project:	Subcontract Lab Services	Description:	S57640
Client Sample ID:	**57640.01**	Sampled:	08/15/13 09:50
Lab Sample ID:	**1308298-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/16/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**170**	2.0	ug/L	4	RSK-175	08/23/13 09:47	JMF	1308807

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308807 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane		33.0	**27.8**	84	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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E 1308298

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

17-12
75320

711 White

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557640
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/15	950	57640.01	GW	3		X						X	*Subcd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/15/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z46647703 58883340 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Trimatrix DATE: 8/16/13 TIME: 1015
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERITS SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308298
Receipt Record Page/Line #: 19-12 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): 8/16/13

☑ Cooler ☐ Box ☐ Other _____ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler # / Time	Client / 1138			
Custody Seals:	☑ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location:	☑ Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via:	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via:	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C				
Temp Blank:				
TB location: Representative / Not Representative				
1	4.8 – 4.8			
2	4.0 – 4.0			
3	4.2 – 4.2			
Average °C				
☐ Cooler ID on COC?				
☐ VOC Trip Blank received?				

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐	☐	If "No", Project Chemist Approval Initials: _____
☑	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐	☐	Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐	☐	If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/16/13 1015	8/16/13 1146	Yes (No)

Log In Forms - Receiving.Log-In_Checklist revision: 3.4

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Analytical Laboratory Report

Report ID: S57662.01(01)
Generated on 09/03/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57662.01-S57662.05
Project: B0064480.2013
Collected Date: 08/16/2013
Submitted Date/Time: 08/16/2013 15:00
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57662.01	MW-04-03(081613)	Groundwater	08/16/2013 08:55
S57662.02	MW-04-02(081613)	Groundwater	08/16/2013 10:07
S57662.03	MW-91-3(081613)	Groundwater	08/16/2013 12:14
S57662.04	Equip Blank(081613)	Liquid	08/16/2013 12:50
S57662.05	Trip Blank(081613)	Liquid	08/16/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57662.01
Sample Tag: MW-04-03(081613)
Collected Date/Time: 08/16/2013 08:55
Matrix: Groundwater
COC Reference: 75293

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	08/30/13 16:22	PER	7440-38-2	
Barium	0.194	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-39-3	
Boron	0.421	mg/L	0.04	SW6020	08/30/13 16:22	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-43-9	
Chromium	0.011	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-48-4	
Copper	0.006	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 16:22	PER	7439-92-1	
Manganese	0.173	mg/L	0.005	SW6020	08/30/13 16:22	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 16:50	CCM	7439-97-6	
Nickel	0.020	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 16:22	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 16:22	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	08/30/13 16:22	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	91-58-7	

Lab Sample ID: S57662.01 (continued)
Sample Tag: MW-04-03(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 18:01	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/23/13 18:01	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 18:01	PL	118-74-1	

Lab Sample ID: S57662.01 (continued)
Sample Tag: MW-04-03(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 14:30	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 18:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 18:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 18:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	74-87-3	
Vinyl chloride	15	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 18:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 18:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 18:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	120-82-1	

Lab Sample ID: S57662.01 (continued)
Sample Tag: MW-04-03(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 18:14	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57662.02
Sample Tag: MW-04-02(081613)
Collected Date/Time: 08/16/2013 10:07
Matrix: Groundwater
COC Reference: 75293

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020	08/30/13 16:23	PER	7440-38-2	
Barium	0.093	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-39-3	
Boron	0.308	mg/L	0.04	SW6020	08/30/13 16:23	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-48-4	
Copper	0.073	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 16:23	PER	7439-92-1	
Manganese	0.312	mg/L	0.005	SW6020	08/30/13 16:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 16:52	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 16:23	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 16:23	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020	08/30/13 16:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	91-58-7	

Lab Sample ID: S57662.02 (continued)
Sample Tag: MW-04-02(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 18:35	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/23/13 18:35	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 18:35	PL	118-74-1	

Lab Sample ID: S57662.02 (continued)
Sample Tag: MW-04-02(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 15:30	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 18:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 18:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 18:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	74-87-3	
Vinyl chloride	12	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-34-3	
cis-1,2-Dichloroethene	16	ug/L	1	SW8260B	08/19/13 18:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 18:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 18:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 18:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	120-82-1	

Lab Sample ID: S57662.02 (continued)
Sample Tag: MW-04-02(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 18:35	WAT	96-12-8	

Lab Sample ID: S57662.03
Sample Tag: MW-91-3(081613)
Collected Date/Time: 08/16/2013 12:14
Matrix: Groundwater
COC Reference: 75293

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	08/30/13 16:25	PER	7440-38-2	
Barium	0.020	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-39-3	
Boron	0.228	mg/L	0.04	SW6020	08/30/13 16:25	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 16:25	PER	7439-92-1	
Manganese	0.015	mg/L	0.005	SW6020	08/30/13 16:25	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 16:54	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 16:25	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 16:25	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-62-2	
Zinc	0.024	mg/L	0.005	SW6020	08/30/13 16:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	91-58-7	

Lab Sample ID: S57662.03 (continued)
Sample Tag: MW-91-3(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 19:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	84-66-2	
Dimethyl phthalate	10	ug/L	1	SW8270C	08/23/13 19:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 19:09	PL	118-74-1	

Lab Sample ID: S57662.03 (continued)
Sample Tag: MW-91-3(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 15:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 18:55	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 18:55	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 18:55	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 18:55	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 18:55	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 18:55	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	120-82-1	

Lab Sample ID: S57662.03 (continued)
Sample Tag: MW-91-3(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 18:55	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57662.04
Sample Tag: Equip Blank(081613)
Collected Date/Time: 08/16/2013 12:50
Matrix: Liquid
COC Reference: 75293

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	08/30/13 16:27	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	08/30/13 16:27	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-48-4	
Copper	0.010	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 16:27	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 16:56	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 16:27	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	08/30/13 16:27	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	91-58-7	

Lab Sample ID: S57662.04 (continued)
Sample Tag: Equip Blank(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 19:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/23/13 19:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	3	ug/L	1	SW8270C	08/23/13 19:43	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 19:43	PL	118-74-1	

Lab Sample ID: S57662.04 (continued)
Sample Tag: Equip Blank(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 16:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 19:16	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 19:16	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 19:16	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 19:16	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 19:16	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 19:16	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	120-82-1	

Lab Sample ID: S57662.04 (continued)
Sample Tag: Equip Blank(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 19:16	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57662.05
Sample Tag: Trip Blank(081613)
Collected Date/Time: 08/16/2013 00:01
Matrix: Liquid
COC Reference: 75293

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 16:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 19:37	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 19:37	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 19:37	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 19:37	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 19:37	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	79-34-5	

Lab Sample ID: S57662.05 (continued)
Sample Tag: Trip Blank(081613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 19:37	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 19:37	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75293

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8837 P.O. NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: R0064480.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE KOVAGEN/TE

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TLC VOC's 1,4-DIOXANE 8260 SIM	TLC SVOC's	TAL METALS
57662.01	8/16/13	0855	MW-04-03(081613)	GW	6	2	3	1					X	X	X
.02	8/16/13	1007	MW-04-02(081613)	GW	6	2	3	1					X	X	X
.03	8/16/13	1214	MW-91-3(081613)	GW	6	2	3	1					X	X	X
.04	8/16/13	1250	EQUIP BLANK (081613)		6	2	3	1					X	X	X
.05	8/16/13	—	TRIP BLANK(081613)		2		2						X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE 8/16/13	TIME 1420
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8-16-13	TIME 1425
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8/16/13	TIME 1500
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57663.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57663.01-S57663.06
Project: RACER LANSING
Collected Date: 08/16/2013
Submitted Date/Time: 08/16/2013 16:20
Sampled by: Billy J Coben
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57663.01	MW-13-29(08162013)	Groundwater	08/16/2013 09:15
S57663.02	MW-13-30(08162013)	Groundwater	08/16/2013 11:20
S57663.03	MW-13-26(08162013)	Groundwater	08/16/2013 13:40
S57663.04	Dup-02(08162013)	Groundwater	08/16/2013 00:01
S57663.05	Field Blank-1(08162013)	Groundwater	08/16/2013 14:15
S57663.06	Trip Blank(08162013)	Liquid	08/16/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57663.01
Sample Tag: MW-13-29(08162013)
Collected Date/Time: 08/16/2013 09:15
Matrix: Groundwater
COC Reference: 75384

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020	08/30/13 16:29	PER	7440-38-2	
Barium	0.021	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-39-3	
Boron	0.835	mg/L	0.04	SW6020	08/30/13 16:29	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-43-9	
Chromium	0.015	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-47-3	
Cobalt	0.014	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-48-4	
Copper	0.006	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 16:29	PER	7439-92-1	
Manganese	0.619	mg/L	0.005	SW6020	08/30/13 16:29	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 16:58	CCM	7439-97-6	
Nickel	0.070	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 16:29	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 16:29	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-62-2	
Zinc	0.015	mg/L	0.005	SW6020	08/30/13 16:29	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	91-58-7	

Lab Sample ID: S57663.01 (continued)
Sample Tag: MW-13-29(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 20:17	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/23/13 20:17	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 20:17	PL	118-74-1	

Lab Sample ID: S57663.01 (continued)
Sample Tag: MW-13-29(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	28	ug/L	5	SW8260B - SIM	08/19/13 16:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 19:57	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 19:57	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 19:57	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 19:57	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 19:57	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 19:57	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	120-82-1	

Lab Sample ID: S57663.01 (continued)
Sample Tag: MW-13-29(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 19:57	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57663.02
Sample Tag: MW-13-30(08162013)
Collected Date/Time: 08/16/2013 11:20
Matrix: Groundwater
COC Reference: 75384

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
Metal Digestion	Completed			3015A	08/30/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	08/30/13 16:33	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020	08/30/13 16:30	PER	7440-38-2	
Barium, Dissolved	0.036	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-39-3	
Barium	0.048	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-39-3	
Boron, Dissolved	0.216	mg/L	0.04	SW6020	08/30/13 16:33	PER	7440-42-8	
Boron	0.226	mg/L	0.04	SW6020	08/30/13 16:30	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-47-3	
Chromium	0.017	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-50-8	
Copper	0.006	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	08/30/13 16:33	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	08/30/13 16:30	PER	7439-92-1	
Manganese, Dissolved	0.518	mg/L	0.005	SW6020	08/30/13 16:33	PER	7439-96-5	
Manganese	0.565	mg/L	0.005	SW6020	08/30/13 16:30	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:10	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:08	CCM	7439-97-6	
Nickel, Dissolved	0.020	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-02-0	
Nickel	0.028	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 16:33	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	08/30/13 16:30	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	08/30/13 16:33	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	08/30/13 16:30	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	08/30/13 16:33	PER	7440-66-6	
Zinc	0.013	mg/L	0.005	SW6020	08/30/13 16:30	PER	7440-66-6	

Lab Sample ID: S57663.02 (continued)
Sample Tag: MW-13-30(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 20:51	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/23/13 20:51	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	88-75-5	

Lab Sample ID: S57663.02 (continued)
Sample Tag: MW-13-30(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 20:51	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 17:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 20:18	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 20:18	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 20:18	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 20:18	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 20:18	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	108-87-2	

Lab Sample ID: S57663.02 (continued)
Sample Tag: MW-13-30(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 20:18	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 20:18	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57663.03
Sample Tag: MW-13-26(08162013)
Collected Date/Time: 08/16/2013 13:40
Matrix: Groundwater
COC Reference: 75384

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	09/03/13 12:25	PER	7440-38-2	
Barium	0.036	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020	09/03/13 12:25	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-43-9	
Chromium	0.008	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 12:25	PER	7439-92-1	
Manganese	0.140	mg/L	0.005	SW6020	09/03/13 12:25	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:12	CCM	7439-97-6	
Nickel	0.027	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 12:25	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 12:25	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 12:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	91-58-7	

Lab Sample ID: S57663.03 (continued)
Sample Tag: MW-13-26(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 21:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/23/13 21:25	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 21:25	PL	118-74-1	

Lab Sample ID: S57663.03 (continued)
Sample Tag: MW-13-26(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	5	ug/L	5	SW8260B - SIM	08/20/13 14:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 20:39	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 20:39	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 20:39	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 20:39	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 20:39	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 20:39	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	120-82-1	

Lab Sample ID: S57663.03 (continued)
Sample Tag: MW-13-26(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 20:39	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57663.04
Sample Tag: Dup-02(08162013)
Collected Date/Time: 08/16/2013 00:01
Matrix: Groundwater
COC Reference: 75384

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	09/03/13 12:23	PER	7440-38-2	
Barium	0.037	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	09/03/13 12:23	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-43-9	
Chromium	0.008	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 12:23	PER	7439-92-1	
Manganese	0.139	mg/L	0.005	SW6020	09/03/13 12:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:14	CCM	7439-97-6	
Nickel	0.025	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 12:23	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 12:23	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020	09/03/13 12:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	91-58-7	

Lab Sample ID: S57663.04 (continued)
Sample Tag: Dup-02(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 22:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/23/13 22:00	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 22:00	PL	118-74-1	

Lab Sample ID: S57663.04 (continued)
Sample Tag: Dup-02(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	7	ug/L	5	SW8260B - SIM	08/20/13 15:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 21:00	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 21:00	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 21:00	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 21:00	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 21:00	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 21:00	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	120-82-1	

Lab Sample ID: S57663.04 (continued)
Sample Tag: Dup-02(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 21:00	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57663.05
Sample Tag: Field Blank-1(08162013)
Collected Date/Time: 08/16/2013 14:15
Matrix: Groundwater
COC Reference: 75384

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 22:34	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/23/13 22:34	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	117-81-7	

Lab Sample ID: S57663.05 (continued)
Sample Tag: Field Blank-1(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 22:34	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 17:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 21:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 21:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 21:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	156-59-2	

Lab Sample ID: S57663.05 (continued)
Sample Tag: Field Blank-1(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloroform	4	ug/L	1	SW8260B	08/19/13 21:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 21:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 21:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	78-87-5	
Bromodichloromethane	1	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 21:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 21:21	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57663.06
Sample Tag: Trip Blank(08162013)
Collected Date/Time: 08/16/2013 00:01
Matrix: Liquid
COC Reference: 75384

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 18:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/19/13 21:42	WAT	67-64-1	
Carbon disulfide	1	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/19/13 21:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/19/13 21:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/19/13 21:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/19/13 21:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	79-34-5	

Lab Sample ID: S57663.06 (continued)
Sample Tag: Trip Blank(08162013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/19/13 21:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/19/13 21:42	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # _____ OF _____

75384

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DR SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8831 P.O. NO.: B00644480.2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COGAN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1,4-D SIMS	TCL SVOC	TAL METALS	TAL METALS (6010 SUB-01)
57663.01	8/16/13	9:15	MW-13-29 (08162013)	GW	6	2	3	1					3	2	1	
.02	8/16/13	11:20	MW-13-30 (08162013)	GW	7	2	3	2					3	2	1	1
.03	8/16/13	13:40	MW-13-26 (08162013)	GW	6	2	3	1					3	2	1	
.04	8/16/13	—	DUP-02 (08162013)	GW	6	2	3	1					3	2	1	
.05	8/16/13	14:15	FIELD BLANK-1 (08162013)	GW	5	2	3						3	2		
.06	—	—	TRIP BLANK (08162013)	L	2		2						2			

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
ARCADIS		8-16-13	16:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
STEVE STELTE RWT		8/16/13	1600
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Valentina Faust		8/16/13	1620

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
STEVE STELTE	8/16/13	1620
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
MERIT	8/16/13	1620

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57664.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
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East Lansing, MI 48823

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Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57664.01-S57664.04
Project: B0064480.2013
Collected Date: 08/15/2013
Submitted Date/Time: 08/16/2013 08:00
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57664.01	MW-12-04(08152013)	Groundwater	08/15/2013 08:55
S57664.02	MW-88-1(08152013)	Groundwater	08/15/2013 11:38
S57664.03	MW-91-6(08152013)	Groundwater	08/15/2013 15:30
S57664.04	Trip Blank	Liquid	08/15/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57664.01
Sample Tag: MW-12-04(08152013)
Collected Date/Time: 08/15/2013 08:55
Matrix: Groundwater
COC Reference: 75297

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020	09/03/13 12:32	PER	7440-38-2	
Barium	0.152	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	09/03/13 12:32	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 12:32	PER	7439-92-1	
Manganese	0.125	mg/L	0.005	SW6020	09/03/13 12:32	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:16	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 12:32	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 12:32	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 12:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	91-58-7	

Lab Sample ID: S57664.01 (continued)
Sample Tag: MW-12-04(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 23:08	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/23/13 23:08	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 23:08	PL	118-74-1	

Lab Sample ID: S57664.01 (continued)
Sample Tag: MW-12-04(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 18:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 15:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 15:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 15:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 15:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 15:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 15:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	120-82-1	

Lab Sample ID: S57664.01 (continued)
Sample Tag: MW-12-04(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 15:28	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57664.02
Sample Tag: MW-88-1(08152013)
Collected Date/Time: 08/15/2013 11:38
Matrix: Groundwater
COC Reference: 75297

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020	09/03/13 12:34	PER	7440-38-2	
Barium	0.094	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020	09/03/13 12:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 12:34	PER	7439-92-1	
Manganese	0.027	mg/L	0.005	SW6020	09/03/13 12:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:18	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 12:34	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 12:34	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 12:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	91-58-7	

Lab Sample ID: S57664.02 (continued)
Sample Tag: MW-88-1(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/23/13 23:42	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	84-66-2	
Dimethyl phthalate	9	ug/L	1	SW8270C	08/23/13 23:42	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/23/13 23:42	PL	118-74-1	

Lab Sample ID: S57664.02 (continued)
Sample Tag: MW-88-1(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 18:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 15:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 15:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 15:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 15:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 15:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 15:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	120-82-1	

Lab Sample ID: S57664.02 (continued)
Sample Tag: MW-88-1(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 15:49	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57664.03
Sample Tag: MW-91-6(08152013)
Collected Date/Time: 08/15/2013 15:30
Matrix: Groundwater
COC Reference: 75297

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-36-0	
Arsenic	0.008	mg/L	0.002	SW6020	09/03/13 12:36	PER	7440-38-2	
Barium	0.147	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	09/03/13 12:36	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 12:36	PER	7439-92-1	
Manganese	0.152	mg/L	0.005	SW6020	09/03/13 12:36	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:20	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 12:36	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 12:36	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-62-2	
Zinc	0.011	mg/L	0.005	SW6020	09/03/13 12:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	91-58-7	

Lab Sample ID: S57664.03 (continued)
Sample Tag: MW-91-6(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/24/13 00:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/24/13 00:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/24/13 00:16	PL	118-74-1	

Lab Sample ID: S57664.03 (continued)
Sample Tag: MW-91-6(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 19:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 16:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 16:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 16:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 16:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 16:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 16:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	120-82-1	

Lab Sample ID: S57664.03 (continued)
Sample Tag: MW-91-6(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 16:10	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57664.04
Sample Tag: Trip Blank
Collected Date/Time: 08/15/2013 00:01
Matrix: Liquid
COC Reference: 75297

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 19:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 16:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 16:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 16:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 16:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 16:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	79-34-5	

Lab Sample ID: S57664.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 16:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 16:30	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75297

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DR
CITY: BRIGHTON STATE: MI ZIP CODE: 48816
PHONE NO.: 810-225-1917 FAX NO.: 810-229-8837 P.O. NO.: B006044480.2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B006044480.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE KONACKI

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC's & 1,4 Dioxane, SIMS	TCL SVOC's	TAL METALS
57664.01	8/15/13	0855	MW-12-04 (08152013)	GW	6	2	3	1					X	X	X
.02	8/15/13	1138	MW-88-1 (08152013)	GW	6	2	3	1					X	X	X
.03	8/15/13	1530	MW-91-6 (08152013)	GW	6	2	3	1					X	X	X
.04	8/15/13	—	TRIP BLANK		1		1						X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 8/15/13	TIME 1700	
RECEIVED BY: SIGNATURE/ORGANIZATION	PMG	DATE 8/15/13	TIME 1730	
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION	Dropbox / Talkative Tom	DATE 8/16/13	TIME 800	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	STEVE STELTER	PMG	DATE 8/15/13	TIME 1700
RECEIVED BY: SIGNATURE/ORGANIZATION	MERIT		DATE 8/15/13	TIME 1730

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57665.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57665.01-S57665.03
Project: Pant 2/4479
Collected Date: 08/15/2013
Submitted Date/Time: 08/16/2013 08:00
Sampled by: Cliff Walls
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57665.01	MW-02(2)	Groundwater	08/15/2013 14:35
S57665.02	MW-12-17	Groundwater	08/15/2013 16:05
S57665.03	Trip Blank	Groundwater	08/15/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57665.01
Sample Tag: MW-02(2)
Collected Date/Time: 08/15/2013 14:35
Matrix: Groundwater
COC Reference: 75301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR
1	500ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	673	mg/L	1	2320B	08/16/13 09:40	JDP		
Carbon Dioxide	225	mg/L	10	4500-CO2C	08/16/13 09:20	JDP		
Nitrate-N	0.5	mg/L	0.5	E300.0	08/16/13 18:16	JDP	14797-55-8	
Sulfate	76	mg/L	5	E300.0	08/16/13 18:16	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/03/13 12:42	PER	7440-38-2	
Barium	0.147	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	09/03/13 12:42	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-50-8	
Iron, Dissolved	0.47	mg/L	0.02	E200.8	09/03/13 12:39	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 12:42	PER	7439-92-1	
Manganese, Dissolved	0.083	mg/L	0.005	E200.8	09/03/13 12:39	PER	7439-96-5	
Manganese	0.105	mg/L	0.005	SW6020	09/03/13 12:42	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:23	CCM	7439-97-6	
Nickel	0.012	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020	09/03/13 12:42	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 12:42	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-62-2	
Zinc	0.019	mg/L	0.005	SW6020	09/03/13 12:42	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	92-52-4	

Lab Sample ID: S57665.01 (continued)
Sample Tag: MW-02(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 20:04	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/26/13 20:04	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	91-20-3	

Lab Sample ID: S57665.01 (continued)
Sample Tag: MW-02(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 20:04	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 19:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 16:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 16:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 16:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 16:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 16:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	124-48-1	

Lab Sample ID: S57665.01 (continued)
Sample Tag: MW-02(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 16:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 16:51	WAT	96-12-8	
Organics								
Methane in Water	Not detected	ug/L	0.5	RSK-175	08/23/13 11:43	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57665.02
Sample Tag: MW-12-17
Collected Date/Time: 08/15/2013 16:05
Matrix: Groundwater
COC Reference: 75301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR
1	500ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/19/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
Metal Digestion	Completed			3015A	09/03/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	250	mg/L	1	2320B	08/16/13 09:38	JDP		
Carbon Dioxide	58	mg/L	10	4500-CO2C	08/16/13 09:18	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 18:28	JDP	14797-55-8	
Sulfate	50	mg/L	5	E300.0	08/16/13 18:28	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	09/03/13 12:44	PER	7440-38-2	
Barium	0.077	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	09/03/13 12:44	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-50-8	
Iron, Dissolved	0.33	mg/L	0.02	E200.8	09/03/13 12:48	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 12:44	PER	7439-92-1	
Manganese, Dissolved	0.223	mg/L	0.005	E200.8	09/03/13 12:48	PER	7439-96-5	
Manganese	0.243	mg/L	0.005	SW6020	09/03/13 12:44	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/19/13 17:25	CCM	7439-97-6	
Nickel	0.006	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 12:44	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 12:44	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 12:44	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	92-52-4	

Lab Sample ID: S57665.02 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 20:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	84-66-2	
Dimethyl phthalate	11	ug/L	1	SW8270C	08/26/13 20:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	91-20-3	

Lab Sample ID: S57665.02 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 20:38	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 20:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 17:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 17:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 17:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 17:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 17:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	124-48-1	

Lab Sample ID: S57665.02 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 17:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 17:12	WAT	96-12-8	
Organics								
Methane in Water	70	ug/L	1.0	RSK-175	08/23/13 11:43	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57665.03
Sample Tag: Trip Blank
Collected Date/Time: 08/15/2013 00:01
Matrix: Groundwater
COC Reference: 75301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 20:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 17:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 17:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 17:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 17:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 17:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	79-34-5	

Lab Sample ID: S57665.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 17:33	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 17:33	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75301

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lacee Rogers
COMPANY: ARCADIS
ADDRESS: Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE:
PHONE NO.: 810 229 8594 FAX NO: 810 229 8837 P.O. NO.: 60069480-2013
E-MAIL ADDRESS: Lacee.Rogers@Arcadis.us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 2 / 4479
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Walls

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 14 plus SMS	TCL SVOC	Alk, Sul, Nit, CO_3	Methane	Diss Fe Mn	TAL Metal
57665.01	8.15.13	14:05	MW-02(2)	GW	11	3	6	2					3	2	-	3	1	1
.02	8.15.13	16:05	MW-02-17	GW	11	3	6	2					3	2	-	3	1	1
.03	-	-	Trip Blank	GW	1		1						1					

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
		8.15.13	1500
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Arcadis		8/15/13	1738
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Dropbox			
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Tabitha Grant		8/16/13	600

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Arcadis	8/15/17	1700
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	8/15/17	1750

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

August 28, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308361	08/21/2013	S57665

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308361**
Project:	Subcontract Lab Services	Description:	S57665
Client Sample ID:	**57665.01**	Sampled:	08/15/13 14:35
Lab Sample ID:	**1308361-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	<0.50	0.50	ug/L	1	RSK-175	08/23/13 11:33	JMF	1308807

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308361**
Project:	Subcontract Lab Services	Description:	S57665
Client Sample ID:	**57665.02**	Sampled:	08/15/13 16:05
Lab Sample ID:	**1308361-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**70**	1.0	ug/L	2	RSK-175	08/23/13 11:43	JMF	1308807

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308807 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane		33.0	**27.8**	84	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26·25

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75321

CHAIN OF CUSTODY RECORD E·1308361

REPORT TO		INVOICE TO	
CONTACT NAME	Tabitha Faust	CONTACT NAME	Julie Teague
COMPANY	Merit Labs	COMPANY	☐ SAME
ADDRESS		ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
PHONE NO. / FAX NO. / P.O. NO.		PHONE NO. / E-MAIL ADDRESS	
E-MAIL ADDRESS / QUOTE NO.			

PROJECT NO./NAME: 557665

SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	
01	6/15/13	1435	57665.01	GW	3		X						X	
02	↓	1605	57665.02	↓	3		X						X	* Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Tabitha Faust ☐ Sampler	DATE 8/20/13	TIME 1600	RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	UPS 1Z 466477035825 2008	DATE	TIME	RECEIVED BY: SIGNATURE/ORGANIZATION	8.21.13 DATE	1150 TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS	NOTES: TEMP. ON ARRIVAL _____	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS		

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308361
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Tm 3222	1330	☐ None ☑ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	4.1	-	4.1
2	4.5	-	4.5
3	4.2	-	4.2
Average °C			4.3
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☐	Chain of Custody record(s)? If No, Initiated By _____
☐	☐	Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☐	Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☐	Sample ID matches COC?
☐	☐	Sample Date and Time matches COC?
☐	☐	Container type completed on COC?
☐	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☐	☐	Average sample temperature ≤6° C?
☐	☐	☐	Was thermal preservation required?
☐	☐		If "No", Project Chemist Approval Initials: _____
☐	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐		Completed Sample Preservation Verification Form?
☐	☐		Samples chemically preserved correctly?
☐	☐		If "No", added orange tag?
☐	☐		Received pre-preserved VOC soils?
	☐ MeOH ☐ Na_2SO_4		

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57677.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57677.01-S57677.05
Project: Plant 2 B0064479.2013.00603
Collected Date: 08/16/2013
Submitted Date/Time: 08/16/2013 17:00
Sampled by: Cliff Walls
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57677.01	MW-12-09	Groundwater	08/16/2013 09:10
S57677.02	MW-12-07	Groundwater	08/16/2013 11:00
S57677.03	MW-12-08	Groundwater	08/16/2013 13:45
S57677.04	Trip Blank	Groundwater	08/16/2013 07:00
S57677.05	Duplicate-03	Groundwater	08/16/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57677.01
Sample Tag: MW-12-09
Collected Date/Time: 08/16/2013 09:10
Matrix: Groundwater
COC Reference: 75302

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	09/03/13 14:08	PER	7440-38-2	
Barium	0.057	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-39-3	
Boron	0.20	mg/L	0.04	SW6020	09/03/13 14:08	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:08	PER	7439-92-1	
Manganese	0.552	mg/L	0.005	SW6020	09/03/13 14:08	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:31	CCM	7439-97-6	
Nickel	0.036	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:08	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:08	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-62-2	
Zinc	0.010	mg/L	0.005	SW6020	09/03/13 14:08	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	91-58-7	

Lab Sample ID: S57677.01 (continued)
Sample Tag: MW-12-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 00:03	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/27/13 00:03	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 00:03	PL	118-74-1	

Lab Sample ID: S57677.01 (continued)
Sample Tag: MW-12-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	7	ug/L	5	SW8260B - SIM	08/20/13 16:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 18:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 18:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 18:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 18:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 18:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 18:28	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	120-82-1	

Lab Sample ID: S57677.01 (continued)
Sample Tag: MW-12-09

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 18:28	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57677.02
Sample Tag: MW-12-07
Collected Date/Time: 08/16/2013 11:00
Matrix: Groundwater
COC Reference: 75302

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/03/13 14:09	PER	7440-38-2	
Barium	0.043	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	09/03/13 14:09	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:09	PER	7439-92-1	
Manganese	0.008	mg/L	0.005	SW6020	09/03/13 14:09	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:43	CCM	7439-97-6	
Nickel	0.006	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020	09/03/13 14:09	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:09	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 14:09	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	91-58-7	

Lab Sample ID: S57677.02 (continued)
Sample Tag: MW-12-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 15:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/26/13 15:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 15:30	PL	118-74-1	

Lab Sample ID: S57677.02 (continued)
Sample Tag: MW-12-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 17:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 18:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 18:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 18:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 18:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 18:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 18:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	120-82-1	

Lab Sample ID: S57677.02 (continued)
Sample Tag: MW-12-07

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 18:49	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57677.03
Sample Tag: MW-12-08
Collected Date/Time: 08/16/2013 13:45
Matrix: Groundwater
COC Reference: 75302

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/03/13 14:39	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/03/13 14:42	PER	7440-38-2	
Barium, Dissolved	0.275	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-39-3	
Barium	0.297	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-39-3	
Boron, Dissolved	0.04	mg/L	0.04	SW6020	09/03/13 14:39	PER	7440-42-8	
Boron	Not detected	mg/L	0.04	SW6020	09/03/13 14:42	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-47-3	
Chromium	0.009	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-50-8	
Copper	0.009	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 14:39	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:42	PER	7439-92-1	
Manganese, Dissolved	0.529	mg/L	0.005	SW6020	09/03/13 14:39	PER	7439-96-5	
Manganese	0.585	mg/L	0.005	SW6020	09/03/13 14:42	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:47	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:45	CCM	7439-97-6	
Nickel, Dissolved	0.031	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-02-0	
Nickel	0.037	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:39	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:42	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 14:39	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:42	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-62-2	
Zinc, Dissolved	0.009	mg/L	0.005	SW6020	09/03/13 14:39	PER	7440-66-6	
Zinc	0.012	mg/L	0.005	SW6020	09/03/13 14:42	PER	7440-66-6	

Lab Sample ID: S57677.03 (continued)
Sample Tag: MW-12-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 16:05	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/26/13 16:05	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	88-75-5	

Lab Sample ID: S57677.03 (continued)
Sample Tag: MW-12-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 16:05	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 17:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 19:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 19:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 19:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 19:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 19:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	108-87-2	

Lab Sample ID: S57677.03 (continued)
Sample Tag: MW-12-08

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 19:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 19:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57677.04
Sample Tag: Trip Blank
Collected Date/Time: 08/16/2013 07:00
Matrix: Groundwater
COC Reference: 75302

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 17:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 19:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 19:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 19:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 19:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 19:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	79-34-5	

Lab Sample ID: S57677.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 19:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 19:30	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57677.05
Sample Tag: Duplicate-03
Collected Date/Time: 08/16/2013 00:01
Matrix: Groundwater
COC Reference: 75302

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/03/13 14:47	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/03/13 14:45	PER	7440-38-2	
Barium, Dissolved	0.293	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-39-3	
Barium	0.287	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-39-3	
Boron, Dissolved	Not detected	mg/L	0.04	SW6020	09/03/13 14:47	PER	7440-42-8	
Boron	Not detected	mg/L	0.04	SW6020	09/03/13 14:45	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 14:47	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:45	PER	7439-92-1	
Manganese, Dissolved	0.544	mg/L	0.005	SW6020	09/03/13 14:47	PER	7439-96-5	
Manganese	0.529	mg/L	0.005	SW6020	09/03/13 14:45	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/20/13 16:01	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:49	CCM	7439-97-6	
Nickel, Dissolved	0.033	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-02-0	
Nickel	0.033	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:47	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:45	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 14:47	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:45	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020	09/03/13 14:47	PER	7440-66-6	
Zinc	0.007	mg/L	0.005	SW6020	09/03/13 14:45	PER	7440-66-6	

Lab Sample ID: S57677.05 (continued)
Sample Tag: Duplicate-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 16:39	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/26/13 16:39	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	88-75-5	

Lab Sample ID: S57677.05 (continued)
Sample Tag: Duplicate-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 16:39	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 18:08	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 19:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 19:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 19:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 19:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 19:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	108-87-2	

Lab Sample ID: S57677.05 (continued)
Sample Tag: Duplicate-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 19:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 19:51	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
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C.O.C. PAGE # 1 OF 1

75302

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lance Rogers
COMPANY: Alcamis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO: 810 229 8594 FAX NO: 810 229 8837 P.O. NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ALCAMIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: PIANT 2 6006 1179.2013 0063 SAMPLER(S) - PLEASE PRINT/SIGN NAME: CLIFF LEWIS

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☑ Detroit (LANSING) ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC SIM 1.4	TCL SVOC	TAL METAL	PASS TAL METAL							
57677.01	8/16/13	9:10	MW-12-09	GW	6	2	3	1					3	2	1	~~1~~							
.02	8/16/13	11:00	MW-12-07	GW	6	2	3	1					3	2	1								
.03	8/16/13	13:45	MW-12-08	GW	7	2	3	2					3	2	1	1							
.04	8/16/13	2:00	TRIP BLANK	GW	3		3						3										
.05	8/16/13	—	DUPLICATE-03	GW	7	2	3	2					3	2	1	1							

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] ☑ Sampler	DATE: 8/16/13	TIME: 1451	
RECEIVED BY: SIGNATURE/ORGANIZATION: STEVE STELTER	DATE: 8/16/13	TIME: 1451	
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Faust	DATE: 8-16-13	TIME: 1700	

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Steve Stelter	DATE: 8/16/13	TIME: 1620	
RECEIVED BY: SIGNATURE/ORGANIZATION: MERIT	DATE: 8/16/13	TIME: 1620	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57678.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57678.01-S57678.05
Project: Plant 6/ B0064481.2013.00603
Collected Date: 08/15/2013 - 08/16/2013
Submitted Date/Time: 08/16/2013 17:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57678.01	P6-SB-37(81613)	Groundwater	08/16/2013 09:11
S57678.02	P6-SB-07(81613)	Groundwater	08/16/2013 11:50
S57678.03	P6-SB-21(81613)	Groundwater	08/16/2013 14:00
S57678.04	MW-03-06(81613)	Groundwater	08/16/2013 15:40
S57678.05	Trip Blank	Liquid	08/15/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S57678.01
Sample Tag: P6-SB-37(81613)
Collected Date/Time: 08/16/2013 09:11
Matrix: Groundwater
COC Reference: 75282

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 13:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020	09/03/13 14:49	PER	7440-38-2	
Barium	0.031	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-39-3	
Boron	0.19	mg/L	0.04	SW6020	09/03/13 14:49	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-48-4	
Copper	0.058	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:49	PER	7439-92-1	
Manganese	0.270	mg/L	0.005	SW6020	09/03/13 14:49	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 16:15	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:49	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:49	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-62-2	
Zinc	0.009	mg/L	0.005	SW6020	09/03/13 14:49	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	91-58-7	

Lab Sample ID: S57678.01 (continued)
Sample Tag: P6-SB-37(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 17:13	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	84-66-2	
Dimethyl phthalate	10	ug/L	1	SW8270C	08/26/13 17:13	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/26/13 17:13	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	98-95-3	
di-n-Octyl phthalate	1	ug/L	1	SW8270C	08/26/13 17:13	PL	117-84-0	
Pentachlorophenol	2	ug/L	1	SW8270C	08/26/13 17:13	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	129-00-0	
2,4,5-Trichlorophenol	3	ug/L	1	SW8270C	08/26/13 17:13	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 17:13	PL	118-74-1	

Lab Sample ID: S57678.01 (continued)
Sample Tag: P6-SB-37(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 18:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 15:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 15:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 15:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 15:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 15:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 15:48	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	120-82-1	

Lab Sample ID: S57678.01 (continued)
Sample Tag: P6-SB-37(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:48	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57678.02
Sample Tag: P6-SB-07(81613)
Collected Date/Time: 08/16/2013 11:50
Matrix: Groundwater
COC Reference: 75282

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 13:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	09/03/13 14:51	PER	7440-38-2	
Barium	0.048	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020	09/03/13 14:51	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:51	PER	7439-92-1	
Manganese	0.067	mg/L	0.005	SW6020	09/03/13 14:51	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 16:17	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:51	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:51	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-62-2	
Zinc	0.007	mg/L	0.005	SW6020	09/03/13 14:51	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	91-58-7	

Lab Sample ID: S57678.02 (continued)
Sample Tag: P6-SB-07(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 17:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	84-66-2	
Dimethyl phthalate	10	ug/L	1	SW8270C	08/26/13 17:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/26/13 17:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 17:47	PL	118-74-1	

Lab Sample ID: S57678.02 (continued)
Sample Tag: P6-SB-07(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 18:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 16:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 16:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 16:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 16:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 16:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 16:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	120-82-1	

Lab Sample ID: S57678.02 (continued)
Sample Tag: P6-SB-07(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57678.03
Sample Tag: P6-SB-21(81613)
Collected Date/Time: 08/16/2013 14:00
Matrix: Groundwater
COC Reference: 75282

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 13:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	09/03/13 14:53	PER	7440-38-2	
Barium	0.025	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-39-3	
Boron	0.34	mg/L	0.04	SW6020	09/03/13 14:53	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-48-4	
Copper	0.016	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:53	PER	7439-92-1	
Manganese	0.244	mg/L	0.005	SW6020	09/03/13 14:53	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 16:19	CCM	7439-97-6	
Nickel	0.005	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:53	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:53	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 14:53	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	91-58-7	

Lab Sample ID: S57678.03 (continued)
Sample Tag: P6-SB-21(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 18:22	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/26/13 18:22	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 18:22	PL	118-74-1	

Lab Sample ID: S57678.03 (continued)
Sample Tag: P6-SB-21(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 19:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 16:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 16:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 16:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 16:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 16:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 16:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	120-82-1	

Lab Sample ID: S57678.03 (continued)
Sample Tag: P6-SB-21(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:30	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57678.04
Sample Tag: MW-03-06(81613)
Collected Date/Time: 08/16/2013 15:40
Matrix: Groundwater
COC Reference: 75282

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 13:00	CCM		
Mercury Digestion	Completed			SW7471A	08/20/13 13:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-36-0	
Arsenic, Dissolved	0.011	mg/L	0.002	SW6020	09/03/13 16:01	PER	7440-38-2	
Arsenic	0.012	mg/L	0.002	SW6020	09/03/13 15:57	PER	7440-38-2	
Barium, Dissolved	0.308	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-39-3	
Barium	0.342	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-39-3	
Boron, Dissolved	0.08	mg/L	0.04	SW6020	09/03/13 16:01	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020	09/03/13 15:57	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-47-3	
Chromium	0.041	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-50-8	
Copper	0.006	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 16:01	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 15:57	PER	7439-92-1	
Manganese, Dissolved	0.294	mg/L	0.005	SW6020	09/03/13 16:01	PER	7439-96-5	
Manganese	0.354	mg/L	0.005	SW6020	09/03/13 15:57	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/20/13 16:32	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 16:22	CCM	7439-97-6	
Nickel, Dissolved	0.059	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-02-0	
Nickel	0.069	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-02-0	
Selenium, Dissolved	0.006	mg/L	0.005	SW6020	09/03/13 16:03	PER	7782-49-2	
Selenium	0.010	mg/L	0.005	SW6020	09/03/13 15:57	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 16:01	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 15:57	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-62-2	
Zinc, Dissolved	0.010	mg/L	0.005	SW6020	09/03/13 16:01	PER	7440-66-6	
Zinc	0.021	mg/L	0.005	SW6020	09/03/13 15:57	PER	7440-66-6	

Lab Sample ID: S57678.04 (continued)
Sample Tag: MW-03-06(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 18:56	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/26/13 18:56	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/26/13 18:56	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	88-75-5	

Lab Sample ID: S57678.04 (continued)
Sample Tag: MW-03-06(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 18:56	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	9	ug/L	5	SW8260B - SIM	08/20/13 19:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	74-87-3	
Vinyl chloride	9	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	108-87-2	

Lab Sample ID: S57678.04 (continued)
Sample Tag: MW-03-06(81613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 16:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57678.05
Sample Tag: Trip Blank
Collected Date/Time: 08/15/2013 08:00
Matrix: Liquid
COC Reference: 75282

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 19:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 17:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 17:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 17:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 17:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 17:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	79-34-5	

Lab Sample ID: S57678.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 17:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:12	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75282

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE Rogers
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO: 810-229-8594 FAX NO: 810 229 8837
E-MAIL ADDRESS: LANCE.Rogers@ARCADIS-US.com
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO: E-MAIL ADDRESS:

PROJECT NO./NAME: PLANT 6/ B006 4481.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ ~~Detroit~~ Lansing ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1,4-Dioxane	TCL SVOC's	TAL Metals	Diss Metals
576780.01	8/16	0911	PG-SB-37 (81613)	GW	6	2	3	1					X	X	X	
.02	8/16	1150	PG-SB-07 (81613)	GW	6	2	3	1					X	X	X	
.03	8/16	1400	PG-SB-21 (81613)	GW	6	2	3	1					X	X	X	
.04	8/16	1540	~~PG~~-MW-03-06 (81613)	GW	7	2	3	2					X	X	X	X
.05	8/15	0800	TRIP BLANK	L	1		1						X			

55

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Steve Stelter / ARCADIS (X Sampler) DATE: 8/16/13 TIME: 1620
RECEIVED BY: SIGNATURE/ORGANIZATION: MERIT DATE: 8/16/13 TIME: 1620

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Fauvet DATE: 8-16-13 TIME: 1700

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57695.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57695.01-S57695.05
Project: Plant 6/B0064481.2013.00603
Collected Date: 08/19/2013
Submitted Date/Time: 08/20/2013 08:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57695.01	P6-SB-18	Groundwater	08/19/2013 10:00
S57695.02	MW-12-13	Groundwater	08/19/2013 13:05
S57695.03	P6-SB-35	Groundwater	08/19/2013 14:40
S57695.04	MW-12-14	Groundwater	08/19/2013 16:45
S57695.05	Trip Blank	Liquid	08/19/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S57695.01
Sample Tag: P6-SB-18
Collected Date/Time: 08/19/2013 10:00
Matrix: Groundwater
COC Reference: 75283

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	115	mg/L	1	2320B	08/20/13 15:14	JDP		
Carbon Dioxide	Not detected	mg/L	2	4500-CO2C	08/20/13 09:21	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/20/13 10:50	JDP	14797-55-8	
Sulfate	97	mg/L	5	E300.0	08/20/13 10:50	JDP	14808-79-8	
Metals								
Antimony	0.007	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-36-0	
Arsenic	0.010	mg/L	0.002	SW6020	09/03/13 16:34	PER	7440-38-2	
Barium	0.040	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-39-3	
Boron	0.17	mg/L	0.04	SW6020	09/03/13 16:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-48-4	
Copper	0.060	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-50-8	
Iron, Dissolved	0.10	mg/L	0.02	E200.8	09/03/13 16:36	PER	7439-89-6	
Lead	0.044	mg/L	0.003	SW6020	09/03/13 16:34	PER	7439-92-1	
Manganese, Dissolved	Not detected	mg/L	0.005	E200.8	09/03/13 16:36	PER	7439-96-5	
Manganese	0.007	mg/L	0.005	SW6020	09/03/13 16:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 14:57	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:34	PER	7782-49-2	
Silver	0.0005	mg/L	0.0005	SW6020	09/03/13 16:34	PER	7440-22-4	
Vanadium	0.020	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020	09/03/13 16:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	1	ug/L	1	SW8270C	08/27/13 19:08	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	92-52-4	

Lab Sample ID: S57695.01 (continued)
Sample Tag: P6-SB-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 19:08	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	84-66-2	
Dimethyl phthalate	13	ug/L	1	SW8270C	08/27/13 19:08	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	08/27/13 19:08	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	91-20-3	

Lab Sample ID: S57695.01 (continued)
Sample Tag: P6-SB-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	85-01-8	
Phenol	1	ug/L	1	SW8270C	08/27/13 19:08	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 19:08	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 15:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	76-13-1	
Acetone	11	ug/L	10	SW8260B	08/23/13 19:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 19:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 19:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 19:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 19:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	124-48-1	

Lab Sample ID: S57695.01 (continued)
Sample Tag: P6-SB-18

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 19:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:17	WAT	96-12-8	
Organics								
Methane in Water	120	ug/L	2.0	RSK-175	08/27/13 10:40	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57695.02
Sample Tag: MW-12-13
Collected Date/Time: 08/19/2013 13:05
Matrix: Groundwater
COC Reference: 75283

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	267	mg/L	1	2320B	08/20/13 15:16	JDP		
Carbon Dioxide	106	mg/L	10	4500-CO2C	08/20/13 09:29	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/20/13 11:01	JDP	14797-55-8	
Sulfate	131	mg/L	5	E300.0	08/20/13 11:01	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	09/03/13 16:38	PER	7440-38-2	
Barium	0.155	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-39-3	
Boron	0.04	mg/L	0.04	SW6020	09/03/13 16:38	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-50-8	
Iron, Dissolved	2.60	mg/L	0.02	E200.8	09/03/13 16:40	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 16:38	PER	7439-92-1	
Manganese, Dissolved	0.129	mg/L	0.005	E200.8	09/03/13 16:40	PER	7439-96-5	
Manganese	0.128	mg/L	0.005	SW6020	09/03/13 16:38	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 14:59	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:38	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 16:38	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 16:38	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	92-52-4	

Lab Sample ID: S57695.02 (continued)
Sample Tag: MW-12-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 19:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/27/13 19:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/27/13 19:43	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	91-20-3	

Lab Sample ID: S57695.02 (continued)
Sample Tag: MW-12-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 19:43	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 16:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 19:37	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 19:37	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 19:37	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 19:37	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 19:37	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	124-48-1	

Lab Sample ID: S57695.02 (continued)
Sample Tag: MW-12-13

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 19:37	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:37	WAT	96-12-8	
Organics								
Methane in Water	2.0	ug/L	0.5	RSK-175	08/27/13 10:45	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57695.03
Sample Tag: P6-SB-35
Collected Date/Time: 08/19/2013 14:40
Matrix: Groundwater
COC Reference: 75283

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	89	mg/L	1	2320B	08/20/13 15:20	JDP		
Carbon Dioxide	Not detected	mg/L	2	4500-CO2C	08/20/13 09:31	JDP		
Nitrate-N	1.6	mg/L	0.5	E300.0	08/20/13 11:13	JDP	14797-55-8	
Sulfate	117	mg/L	5	E300.0	08/20/13 11:13	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-36-0	
Arsenic	0.015	mg/L	0.002	SW6020	09/03/13 16:41	PER	7440-38-2	
Barium	0.016	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-39-3	
Boron	0.19	mg/L	0.04	SW6020	09/03/13 16:41	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-43-9	
Chromium	0.010	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-48-4	
Copper	0.007	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-50-8	
Iron, Dissolved	0.09	mg/L	0.02	E200.8	09/03/13 16:43	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 16:41	PER	7439-92-1	
Manganese, Dissolved	Not detected	mg/L	0.005	E200.8	09/03/13 16:43	PER	7439-96-5	
Manganese	Not detected	mg/L	0.005	SW6020	09/03/13 16:41	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:01	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:41	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 16:41	PER	7440-22-4	
Vanadium	0.027	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-62-2	
Zinc	0.010	mg/L	0.005	SW6020	09/03/13 16:41	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	92-52-4	

Lab Sample ID: S57695.03 (continued)
Sample Tag: P6-SB-35

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 20:17	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	84-66-2	
Dimethyl phthalate	10	ug/L	1	SW8270C	08/27/13 20:17	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/27/13 20:17	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	91-20-3	

Lab Sample ID: S57695.03 (continued)
Sample Tag: P6-SB-35

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 20:17	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 16:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 19:58	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 19:58	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 19:58	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 19:58	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 19:58	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	124-48-1	

Lab Sample ID: S57695.03 (continued)
Sample Tag: P6-SB-35

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 19:58	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:58	WAT	96-12-8	
Organics								
Methane in Water	3.1	ug/L	0.5	RSK-175	08/27/13 10:49	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57695.04
Sample Tag: MW-12-14
Collected Date/Time: 08/19/2013 16:45
Matrix: Groundwater
COC Reference: 75283

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	470	mg/L	1	2320B	08/20/13 15:22	JDP		
Carbon Dioxide	239	mg/L	10	4500-CO2C	08/20/13 09:33	JDP		
Nitrate-N	3.3	mg/L	0.5	E300.0	08/20/13 11:25	JDP	14797-55-8	
Sulfate	206	mg/L	5	E300.0	08/20/13 11:25	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	09/03/13 16:45	PER	7440-38-2	
Barium	0.110	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	09/03/13 16:45	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-43-9	
Chromium	0.006	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-50-8	
Iron, Dissolved	0.71	mg/L	0.02	E200.8	09/03/13 16:47	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 16:45	PER	7439-92-1	
Manganese, Dissolved	0.358	mg/L	0.005	E200.8	09/03/13 16:47	PER	7439-96-5	
Manganese	0.368	mg/L	0.005	SW6020	09/03/13 16:45	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:03	CCM	7439-97-6	
Nickel	0.014	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:45	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 16:45	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020	09/03/13 16:45	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	92-52-4	

Lab Sample ID: S57695.04 (continued)
Sample Tag: MW-12-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 20:51	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	84-66-2	
Dimethyl phthalate	10	ug/L	1	SW8270C	08/27/13 20:51	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/27/13 20:51	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	91-20-3	

Lab Sample ID: S57695.04 (continued)
Sample Tag: MW-12-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 20:51	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 16:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 20:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 20:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 20:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 20:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 20:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	124-48-1	

Lab Sample ID: S57695.04 (continued)
Sample Tag: MW-12-14

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 20:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:19	WAT	96-12-8	
Organics								
Methane in Water	3.4	ug/L	0.5	RSK-175	08/27/13 10:53	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57695.05
Sample Tag: Trip Blank
Collected Date/Time: 08/19/2013 08:00
Matrix: Liquid
COC Reference: 75283

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 17:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 20:40	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 20:40	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 20:40	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 20:40	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 20:40	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	79-34-5	

Lab Sample ID: S57695.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 20:40	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:40	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75283

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE Rogers
COMPANY: ARCADIS
ADDRESS: 10559
CITY: ~~LAUSING~~ Brighton STATE: MI ZIP CODE: 48116
PHONE NO: 810 229 8594 FAX NO: 810 229 8834 P.O. NO.:
E-MAIL ADDRESS: LANCE.Rodgers@ARCADIS-US.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: PlanT6/ B006 44801.20130603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE STELTER

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ ~~Detroit~~ Lansing ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 8260, SDWA	TCL SVOC's	TAL Metals	Diss Fe and Mn	Sulfate, Nitrate, Cl	Alkalinity	Methane	Diss Metals			
57695.01	8/19	1000	PG-SB-18	GW	11	3	6	2					X	X	X	X	X	X	X				
.02	8/19	1305	MW-12-13	GW	11	3	6	2					X	X	X	X	X	X	X				
.03	8/19	1440	PG-SB-35	GW	11	3	6	2					X	X	X	X	X	X	X				
.04	8/19	1645	MW-12-14	GW	11	3	6	2					X	X	X	X	X	X	X				
.05	8/19	0800	TRIP Blk	L									X										

RELINQUISHED BY: SIGNATURE/ORGANIZATION: STEVE STELTER	☒ Sampler	DATE: 8/19/13	TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: MERIT LABS		DATE: 8/19/13	TIME: 1700
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Dropbox Tabatha Fawcett		DATE: 8/20/13	TIME: 800
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 03, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308365	08/21/2013	S57695

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308365**
Project:	Subcontract Lab Services	Description:	S57695
Client Sample ID:	**57695.01**	Sampled:	08/19/13 10:00
Lab Sample ID:	**1308365-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**120**	2.0	ug/L	4	RSK-175	08/27/13 10:40	JMF	1308930

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308365**
Project:	Subcontract Lab Services	Description:	S57695
Client Sample ID:	**57695.02**	Sampled:	08/19/13 13:05
Lab Sample ID:	**1308365-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**2.0**	0.50	ug/L	1	RSK-175	08/27/13 10:45	JMF	1308930

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308365**
Project:	Subcontract Lab Services	Description:	S57695
Client Sample ID:	**57695.03**	Sampled:	08/19/13 14:40
Lab Sample ID:	**1308365-03**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**3.1**	0.50	ug/L	1	RSK-175	08/27/13 10:49	JMF	1308930

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308365**
Project:	Subcontract Lab Services	Description:	S57695
Client Sample ID:	**57695.04**	Sampled:	08/19/13 16:45
Lab Sample ID:	**1308365-04**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**3.4**	0.50	ug/L	1	RSK-175	08/27/13 10:53	JMF	1308930

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308930 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/27/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29004	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/27/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29004	
Methane		33.0	**36.3**	110	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26·29

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75325

CHAIN OF CUSTODY RECORD E 1308365

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557695
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO3	H2SO4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/19	1000	57695.01	GW	3		X						X	
02	↓	1305	57695.02	↓	↓		↓						↓	*Subcd to Trimatrix
03		1440	57695.03											
04		1645	57695.04											
			~~57695.05 TT~~											

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler	DATE: 8/20/13	TIME: 1600	RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: 17 466 427 03 5825 2008	DATE:	TIME:	RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE: 8·21·13	TIME: 1150
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	SEAL NO.: SEAL INTACT YES ☐ NO ☐	INITIALS:	NOTES: TEMP. ON ARRIVAL _____
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	SEAL NO.: SEAL INTACT YES ☐ NO ☐	INITIALS:	

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308365
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
Im 3222 / 1330			
Custody Seals:			
☑ None	☐ None	☐ None	☐ None
☐ Present / Intact	☐ Present / Intact	☐ Present / Intact	☐ Present / Intact
☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact
Coolant Location:			
Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via:			
☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers
☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers
☑ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers
☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers
Alternate Temperature Taken Via:			
☐ Temperature Blank (TB)	☐ Temperature Blank (TB)	☐ Temperature Blank (TB)	☐ Temperature Blank (TB)
☐ 1 Container	☐ 1 Container	☐ 1 Container	☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C
Temp Blank:	Temp Blank:	Temp Blank:	Temp Blank:
TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative
1 4.1 - 4.1	1	1	1
2 4.5 - 4.5	2	2	2
3 4.2 - 4.2	3	3	3
Average °C: 4.3	Average °C	Average °C	Average °C
☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?
☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes / No
- ☐ ☐ Chain of Custody record(s)? If No, Initiated By _____
- ☐ ☐ Received for Lab Signed/Date/Time?
- ☐ ☐ Shipping document?
- ☐ ☐ Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A / Yes / No
- ☐ ☐ ☐ Average sample temperature ≤6° C?
- ☐ ☐ ☐ Was thermal preservation required?
- ☐ ☐ ☐ If "No", Project Chemist Approval Intials: _____
- ☐ ☐ ☐ If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- ☐ ☐ ☐ Completed Sample Preservation Verification Form?
- ☐ ☐ ☐ Samples chemically preserved correctly?
- ☐ ☐ ☐ If "No", added orange tag?
- ☐ ☐ ☐ Received pre-preserved VOC soils?
  - ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes / No
- ☐ ☐ Analysis Requested?
- ☐ ☐ Sample ID matches COC?
- ☐ ☐ Sample Date and Time matches COC?
- ☐ ☐ Container type completed on COC?
- ☐ ☐ All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☑ NONE RECEIVED
- ☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A / Yes / No
- ☐ ☐ ☐ Broken containers/lids?
- ☐ ☐ ☐ Missing or incomplete labels?
- ☐ ☐ ☐ Illegible information on labels?
- ☐ ☐ ☐ Low volume received?
- ☐ ☐ ☐ Inappropriate or non-TriMatrix containers received?
- ☐ ☐ ☐ VOC vials / TOX containers have headspace?
- ☐ ☐ ☐ Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57666.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57666.01-S57666.02
Project: Plant 6/B0064481.2013.00603
Collected Date: 08/13/2013 - 08/15/2013
Submitted Date/Time: 08/16/2013 08:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57666.01	MW-12-12	Groundwater	08/15/2013 15:43
S57666.02	Trip Blank	Liquid	08/13/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S57666.01
Sample Tag: MW-12-12
Collected Date/Time: 08/15/2013 15:43
Matrix: Groundwater
COC Reference: 75308

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
3	125ml Plastic	HNO3	Yes	5.4	IR
1	500ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	426	mg/L	1	2320B	08/16/13 09:36	JDP		
Carbon Dioxide	130	mg/L	10	4500-CO2C	08/16/13 09:16	JDP		
Nitrate-N	1.1	mg/L	0.5	E300.0	08/16/13 17:53	JDP	14797-55-8	
Sulfate	183	mg/L	10	E300.0	08/16/13 19:49	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020	09/03/13 13:59	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/03/13 13:55	PER	7440-38-2	
Barium, Dissolved	0.093	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-39-3	
Barium	0.095	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	09/03/13 13:59	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020	09/03/13 13:55	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-47-3	
Chromium	0.009	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-47-3	
Cobalt, Dissolved	0.008	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-48-4	
Cobalt	0.010	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-50-8	
Iron, Dissolved	0.84	mg/L	0.02	E200.8	09/03/13 13:59	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 13:59	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 13:55	PER	7439-92-1	
Manganese, Dissolved	0.263	mg/L	0.005	SW6020	09/03/13 13:59	PER	7439-96-5	
Manganese	0.320	mg/L	0.005	SW6020	09/03/13 13:55	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:17	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:15	CCM	7439-97-6	
Nickel, Dissolved	0.056	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-02-0	
Nickel	0.062	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 13:59	PER	7782-49-2	

Lab Sample ID: S57666.01 (continued)
Sample Tag: MW-12-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 13:55	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 13:59	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 13:55	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020	09/03/13 13:59	PER	7440-66-6	
Zinc	0.014	mg/L	0.005	SW6020	09/03/13 13:55	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	08/26/13 21:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 21:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	84-66-2	
Dimethyl phthalate	18	ug/L	1	SW8270C	08/26/13 21:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/26/13 21:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	87-68-3	

Lab Sample ID: S57666.01 (continued)
Sample Tag: MW-12-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 21:12	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 20:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/20/13 15:05	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/20/13 15:05	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/20/13 15:05	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	110-82-7	

Lab Sample ID: S57666.01 (continued)
Sample Tag: MW-12-12

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/20/13 15:05	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/20/13 15:05	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/20/13 15:05	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/20/13 15:05	WAT	96-12-8	
Organics								
Methane in Water	5.4	ug/L	0.5	RSK-175	08/23/13 11:46	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57666.02
Sample Tag: Trip Blank
Collected Date/Time: 08/13/2013 08:00
Matrix: Liquid
COC Reference: 75308

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/19/13 14:30	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/19/13 20:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/20/13 15:26	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/20/13 15:26	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/20/13 15:26	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/20/13 15:26	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/20/13 15:26	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	79-34-5	

Lab Sample ID: S57666.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/20/13 15:26	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/20/13 15:26	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75308

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE Rogers
COMPANY: ARCADIS
ADDRESS: 10559 [illegible] BRIGHTON
CITY: [illegible] STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8837
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS.COM
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: PLANT 6 / B006 4481.2013006603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE STELTER
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ ~~Detroit~~ KMS ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1,4-D SIMS	TCL SVOC'S	TAL METALS	Dissolved Fe, Mn	Sulfate, Nitrate Cor	Alkalinity	METHANE/	DISS MEDALS
576606.01	8/15	1543	MW-12-12	GW	12	3	6	3					X	X	X	X	X	X	X	X
.02	8/13	0800	TRIP BLANK	L	1		1						X							

SS

RELINQUISHED BY: SIGNATURE/ORGANIZATION: STEVE STELTER (SME) (Sampler) DATE: 8/15/13 TIME: 1700
RECEIVED BY: SIGNATURE/ORGANIZATION: MERIT STORAGE LOCKER DATE: 8/15/13 TIME: 1730

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Dropbox DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tahnta Feent DATE: 8/16/13 TIME: 806

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Steve Stelter PMG DATE: 8/15/13 TIME: 1738
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

August 28, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308362	08/21/2013	S57666

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308362**
Project:	Subcontract Lab Services	Description:	S57666
Client Sample ID:	**57666.01**	Sampled:	08/15/13 15:43
Lab Sample ID:	**1308362-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**5.4**	0.50	ug/L	1	RSK-175	08/23/13 11:46	JMF	1308807

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308807 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane		33.0	**27.8**	84	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26·26

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75322

CHAIN OF CUSTODY RECORD

E: 1308362

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 55 7666
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methanol	ANALYSIS
01	8/15/13	1543	57666.01	GW	3		X						X	

*Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/20/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466477 03 5825 2008 DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8.21.13 TIME: 1150

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308302
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Tm 3222	1330	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1 4.1	-	4.1
2 4.5	-	4.5
3 4.2	-	4.2
Average °C		4.3

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☐	Chain of Custody record(s)? If No, Initiated By _____
☐	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☐	☐	Average sample temperature ≤6° C?
☐	☐	☐	Was thermal preservation required?
☐	☐	☐	If "No", Project Chemist Approval Intials: _____
☐	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐	☐	Completed Sample Preservation Verification Form?
☐	☐	☐	Samples chemically preserved correctly?
☐	☐	☐	If "No", added orange tag?
☐	☐	☐	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☐	Sample ID matches COC?
☐	☐	Sample Date and Time matches COC?
☐	☐	Container type completed on COC?
☐	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / No

Log In Forms - Receiving.Log-In_Checklist revision: 3.4

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Analytical Laboratory Report

Report ID: S57667.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57667.01-S57667.05
Project: RACER Lansing Plant-3
Collected Date: 08/15/2013
Submitted Date/Time: 08/16/2013 08:00
Sampled by: Billy J Coson
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57667.01	MW-91-5(08152013)	Groundwater	08/15/2013 09:35
S57667.02	MW-13-24(08152013)	Groundwater	08/15/2013 12:35
S57667.03	MW-12-20(08152013)	Groundwater	08/15/2013 15:30
S57667.04	Equipment Blank-2(08152013)	Groundwater	08/15/2013 16:15
S57667.05	Trip Blank(08152013)	Liquid	08/15/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57667.01
Sample Tag: MW-91-5(08152013)
Collected Date/Time: 08/15/2013 09:35
Matrix: Groundwater
COC Reference: 75288

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/23/13 10:33	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-36-0	
Arsenic	0.010	mg/L	0.002	SW6020	09/03/13 14:00	PER	7440-38-2	
Barium	0.342	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	09/03/13 14:00	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:00	PER	7439-92-1	
Manganese	0.081	mg/L	0.005	SW6020	09/03/13 14:00	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:19	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:00	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:00	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 14:00	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	91-58-7	

Lab Sample ID: S57667.01 (continued)
Sample Tag: MW-91-5(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 21:47	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/26/13 21:47	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 21:47	PL	118-74-1	

Lab Sample ID: S57667.01 (continued)
Sample Tag: MW-91-5(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 15:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 17:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 17:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 17:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 17:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 17:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 17:04	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	120-82-1	

Lab Sample ID: S57667.01 (continued)
Sample Tag: MW-91-5(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 17:04	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57667.02
Sample Tag: MW-13-24(08152013)
Collected Date/Time: 08/15/2013 12:35
Matrix: Groundwater
COC Reference: 75288

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
3	125ml Plastic	HNO3	Yes	5.4	IR
1	500ml Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/23/13 10:33	LBR		
Inorganics								
Alkalinity as CaCO3	517	mg/L	1	2320B	08/16/13 09:34	JDP		
Carbon Dioxide	286	mg/L	10	4500-CO2C	08/16/13 09:08	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/16/13 18:05	JDP	14797-55-8	
Sulfate	1,120	mg/L	100	E300.0	08/16/13 20:00	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/03/13 14:04	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/03/13 14:02	PER	7440-38-2	
Barium, Dissolved	0.028	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-39-3	
Barium	0.030	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-39-3	
Boron, Dissolved	0.17	mg/L	0.04	SW6020	09/03/13 14:04	PER	7440-42-8	
Boron	0.17	mg/L	0.04	SW6020	09/03/13 14:02	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-50-8	
Copper	0.005	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-50-8	
Iron, Dissolved	15.0	mg/L	0.02	E200.8	09/03/13 14:04	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 14:04	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:02	PER	7439-92-1	
Manganese, Dissolved	0.332	mg/L	0.005	SW6020	09/03/13 14:04	PER	7439-96-5	
Manganese	0.330	mg/L	0.005	SW6020	09/03/13 14:02	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:23	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:21	CCM	7439-97-6	
Nickel, Dissolved	0.028	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-02-0	
Nickel	0.027	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:04	PER	7782-49-2	

Lab Sample ID: S57667.02 (continued)
Sample Tag: MW-13-24(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:02	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 14:04	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:02	PER	7440-22-4	
Vanadium, Dissolved	0.006	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-62-2	
Vanadium	0.011	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020	09/03/13 14:04	PER	7440-66-6	
Zinc	0.014	mg/L	0.005	SW6020	09/03/13 14:02	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 22:21	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	84-66-2	
Dimethyl phthalate	9	ug/L	1	SW8270C	08/26/13 22:21	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	87-68-3	

Lab Sample ID: S57667.02 (continued)
Sample Tag: MW-13-24(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 22:21	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 15:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 17:25	WAT	67-64-1	
Carbon disulfide	1	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 17:25	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 17:25	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	110-82-7	

Lab Sample ID: S57667.02 (continued)
Sample Tag: MW-13-24(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 17:25	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 17:25	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 17:25	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 17:25	WAT	96-12-8	
Organics								
Methane in Water	0.74	ug/L	0.5	RSK-175	08/23/13 11:50	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57667.03
Sample Tag: MW-12-20(08152013)
Collected Date/Time: 08/15/2013 15:30
Matrix: Groundwater
COC Reference: 75288

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/23/13 10:33	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/03/13 14:11	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/03/13 14:06	PER	7440-38-2	
Barium, Dissolved	0.118	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-39-3	
Barium	0.125	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	09/03/13 14:11	PER	7440-42-8	
Boron	0.08	mg/L	0.04	SW6020	09/03/13 14:06	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-47-3	
Chromium	0.009	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 14:11	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:06	PER	7439-92-1	
Manganese, Dissolved	0.115	mg/L	0.005	SW6020	09/03/13 14:11	PER	7439-96-5	
Manganese	0.133	mg/L	0.005	SW6020	09/03/13 14:06	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:33	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:25	CCM	7439-97-6	
Nickel, Dissolved	0.014	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-02-0	
Nickel	0.015	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:11	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 14:06	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 14:11	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:06	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-62-2	
Zinc, Dissolved	0.010	mg/L	0.005	SW6020	09/03/13 14:11	PER	7440-66-6	
Zinc	0.014	mg/L	0.005	SW6020	09/03/13 14:06	PER	7440-66-6	

Lab Sample ID: S57667.03 (continued)
Sample Tag: MW-12-20(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 22:55	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/26/13 22:55	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/26/13 22:55	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	88-75-5	

Lab Sample ID: S57667.03 (continued)
Sample Tag: MW-12-20(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 22:55	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 16:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 21:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 21:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 21:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 21:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 21:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	108-87-2	

Lab Sample ID: S57667.03 (continued)
Sample Tag: MW-12-20(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 21:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 21:35	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57667.04
Sample Tag: Equipment Blank-2(08152013)
Collected Date/Time: 08/15/2013 16:15
Matrix: Groundwater
COC Reference: 75288

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 17:30	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/23/13 10:33	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/03/13 13:32	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/03/13 13:32	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 13:32	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 15:27	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 13:32	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 13:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	91-58-7	

Lab Sample ID: S57667.04 (continued)
Sample Tag: Equipment Blank-2(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 23:29	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/26/13 23:29	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 23:29	PL	118-74-1	

Lab Sample ID: S57667.04 (continued)
Sample Tag: Equipment Blank-2(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 16:19	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 17:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 17:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 17:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 17:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 17:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 17:46	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	120-82-1	

Lab Sample ID: S57667.04 (continued)
Sample Tag: Equipment Blank-2(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 17:46	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57667.05
Sample Tag: Trip Blank(08152013)
Collected Date/Time: 08/15/2013 00:01
Matrix: Liquid
COC Reference: 75288

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/23/13 10:33	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 16:37	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 18:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 18:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 18:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 18:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 18:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	79-34-5	

Lab Sample ID: S57667.05 (continued)
Sample Tag: Trip Blank(08152013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 18:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 18:07	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75288

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8837 P.O. NO.: B00064480-2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING PLANT-3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COGAN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1,4 D SIMS	TCL SVOC	TAL METALS	DISSOLVED Fe, Mn	DISSOLVED TAL METALS	SULFATE, NITRATE, CO_2, ALKALINITY	METHANE
576670.01	8/15/13	9:35	MW-91-5 (08152013)	GW	6	2	3	1					3	2	1				
.02	8/15/13	12:35	MW-13-24 (08152013)	GW	12	3	3	3					3	2	1	1	1	1	3
.03	8/15/13	15:30	MW-12-20 (08152013)	GW	7	2	3	2					3	2	1		1		
.04	8/15/13	16:15	EQUIPMENT BLANK-2 (08152013)	GW	6	2	3	1					3	2	1				
.05	—	—	TRIP BLANK (08152013)	L	1		1						1						

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS	X Sampler	DATE 8-15-13	TIME 17:00
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 8-15-13	TIME 1730
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Dropbox		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Talewton Fawcett		DATE 8/16/13	TIME 800

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Steve Stelter		DATE 8/15/13	TIME 1700
RECEIVED BY: SIGNATURE/ORGANIZATION	MERIT		DATE 8/15/13	TIME 1730

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.4
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

August 28, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308363	08/21/2013	S57667

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308363**
Project:	Subcontract Lab Services	Description:	S57667
Client Sample ID:	**57667.02**	Sampled:	08/15/13 12:35
Lab Sample ID:	**1308363-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**0.74**	0.50	ug/L	1	RSK-175	08/23/13 11:50	JMF	1308807

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308807 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane		33.0	**27.8**	84	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26·27

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C.O.C. PAGE # _____ OF _____

75323

E. 13083363

CHAIN OF CUSTODY RECORD

REPORT TO		INVOICE TO	
CONTACT NAME	Tabitha Faust	CONTACT NAME	Julie Teague ☒ SAME
COMPANY		COMPANY	
ADDRESS		ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
PHONE NO. / FAX NO. / P.O. NO.		PHONE NO. / E-MAIL ADDRESS	
E-MAIL ADDRESS / QUOTE NO.			

PROJECT NO./NAME: 557667

SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/15	1235	557667.02	GW	3		X						X	*Subject to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler — DATE: 8/20/13 — TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: IZ 466 477 03 582 52008 — DATE — TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE — TIME
RECEIVED BY: SIGNATURE/ORGANIZATION — DATE: 8-21-13 — TIME: 1150

RELINQUISHED BY: SIGNATURE/ORGANIZATION — DATE — TIME
RECEIVED BY: SIGNATURE/ORGANIZATION — DATE — TIME

SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS
SEAL NO. — SEAL INTACT YES ☐ NO ☐ — INITIALS

NOTES: TEMP. ON ARRIVAL _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERITS SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308363
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☐ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Recorded °C	Correction Factor °C	Actual °C
Tm 3222	1330	☐ None ☑ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container	Temp Blank:		
						TB location: Representative / Not Representative		
						1 4.1	-	4.1
						2 4.5	-	4.5
						3 4.2	-	4.2
							Average °C	4.3
						☐ Cooler ID on COC?		
						☐ VOC Trip Blank received?		

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Recorded °C	Correction Factor °C	Actual °C
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container	Temp Blank:		
						TB location: Representative / Not Representative		
						1		
						2		
						3		
							Average °C	
						☐ Cooler ID on COC?		
						☐ VOC Trip Blank received?		

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Recorded °C	Correction Factor °C	Actual °C
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container	Temp Blank:		
						TB location: Representative / Not Representative		
						1		
						2		
						3		
							Average °C	
						☐ Cooler ID on COC?		
						☐ VOC Trip Blank received?		

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Recorded °C	Correction Factor °C	Actual °C
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container	Temp Blank:		
						TB location: Representative / Not Representative		
						1		
						2		
						3		
							Average °C	
						☐ Cooler ID on COC?		
						☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes / No
- ☐ ☑ Chain of Custody record(s)? If No, Initiated By _____
- ☐ ☐ Received for Lab Signed/Date/Time?
- ☐ ☐ Shipping document?
- ☐ ☐ Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A / Yes / No
- ☐ ☐ ☐ Average sample temperature ≤6° C?
- ☐ ☑ ☐ Was thermal preservation required?
- ☐ ☐ ☐ If "No", Project Chemist Approval Intials: _____
- ☐ ☐ ☐ If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- ☐ ☐ ☐ Completed Sample Preservation Verification Form?
- ☐ ☐ ☐ Samples chemically preserved correctly?
- ☐ ☐ ☐ If "No", added orange tag?
- ☐ ☐ ☐ Received pre-preserved VOC soils?
  - ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes / No
- ☐ ☐ Analysis Requested?
- ☐ ☑ Sample ID matches COC?
- ☐ ☑ Sample Date and Time matches COC?
- ☐ ☐ Container type completed on COC?
- ☐ ☑ All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☑ NONE RECEIVED
- ☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A / Yes / No
- ☐ ☐ ☑ Broken containers/lids?
- ☐ ☐ ☑ Missing or incomplete labels?
- ☐ ☐ ☑ Illegible information on labels?
- ☐ ☐ ☑ Low volume received?
- ☐ ☐ ☑ Inappropriate or non-TriMatrix containers received?
- ☐ ☐ ☑ VOC vials / TOX containers have headspace?
- ☐ ☐ ☑ Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57694.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57694.01-S57694.05
Project: B0064480.2013
Collected Date: 08/19/2013
Submitted Date/Time: 08/20/2013 08:00
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57694.01	MW-02-03(3)(08192013)	Groundwater	08/19/2013 09:38
S57694.02	MW-02-04(3)(08192013)	Groundwater	08/19/2013 12:05
S57694.03	DUPE-04(08192013)	Groundwater	08/19/2013 00:01
S57694.04	MW-02-01(3)(08192013)	Groundwater	08/19/2013 16:21
S57694.05	Trip Blank(08192013)	Liquid	08/19/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57694.01
Sample Tag: MW-02-03(3)(08192013)
Collected Date/Time: 08/19/2013 09:38
Matrix: Groundwater
COC Reference: 75295

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR
1	125ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 13:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	08/20/13 09:14	MJC	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020	09/03/13 14:56	PER	7440-38-2	
Barium	0.712	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/03/13 14:56	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 14:56	PER	7439-92-1	
Manganese	0.113	mg/L	0.005	SW6020	09/03/13 14:56	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 17:02	CCM	7439-97-6	
Nickel	0.025	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-02-0	
Selenium	0.005	mg/L	0.005	SW6020	09/03/13 14:56	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 14:56	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020	09/03/13 14:56	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	205-99-2	

Lab Sample ID: S57694.01 (continued)
Sample Tag: MW-02-03(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/26/13 19:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/26/13 19:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	129-00-0	

Lab Sample ID: S57694.01 (continued)
Sample Tag: MW-02-03(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/26/13 19:30	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 14:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 17:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 17:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 17:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 17:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 17:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 17:33	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	100-42-5	

Lab Sample ID: S57694.01 (continued)
Sample Tag: MW-02-03(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:33	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57694.02
Sample Tag: MW-02-04(3)(08192013)
Collected Date/Time: 08/19/2013 12:05
Matrix: Groundwater
COC Reference: 75295

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR
1	125ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 13:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	08/20/13 09:26	MJC	18540-29-9	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-36-0	
Arsenic	0.015	mg/L	0.002	SW6020	09/03/13 15:04	PER	7440-38-2	
Barium	0.167	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/03/13 15:04	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-47-3	
Cobalt	0.009	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 15:04	PER	7439-92-1	
Manganese	0.072	mg/L	0.005	SW6020	09/03/13 15:04	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 17:04	CCM	7439-97-6	
Nickel	0.031	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 15:04	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 15:04	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020	09/03/13 15:04	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	205-99-2	

Lab Sample ID: S57694.02 (continued)
Sample Tag: MW-02-04(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 17:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/27/13 17:25	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	129-00-0	

Lab Sample ID: S57694.02 (continued)
Sample Tag: MW-02-04(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 17:25	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 14:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 17:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 17:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 17:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 17:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 17:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 17:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	100-42-5	

Lab Sample ID: S57694.02 (continued)
Sample Tag: MW-02-04(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:53	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57694.03
Sample Tag: DUPE-04(08192013)
Collected Date/Time: 08/19/2013 00:01
Matrix: Groundwater
COC Reference: 75295

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/20/13 13:00	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-36-0	
Arsenic	0.009	mg/L	0.002	SW6020	09/03/13 16:05	PER	7440-38-2	
Barium	0.744	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/03/13 16:05	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 16:05	PER	7439-92-1	
Manganese	0.119	mg/L	0.005	SW6020	09/03/13 16:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/20/13 17:06	CCM	7439-97-6	
Nickel	0.026	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:05	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 16:05	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/03/13 16:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	91-58-7	

Lab Sample ID: S57694.03 (continued)
Sample Tag: DUPE-04(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 17:59	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/27/13 17:59	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 17:59	PL	118-74-1	

Lab Sample ID: S57694.03 (continued)
Sample Tag: DUPE-04(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 15:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 18:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 18:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 18:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 18:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 18:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 18:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	120-82-1	

Lab Sample ID: S57694.03 (continued)
Sample Tag: DUPE-04(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:14	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57694.04
Sample Tag: MW-02-01(3)(08192013)
Collected Date/Time: 08/19/2013 16:21
Matrix: Groundwater
COC Reference: 75295

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
3	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	250	mg/L	1	2320B	08/20/13 15:10	JDP		
Carbon Dioxide	107	mg/L	10	4500-CO2C	08/20/13 09:25	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/20/13 10:38	JDP	14797-55-8	
Sulfate	68	mg/L	5	E300.0	08/20/13 10:38	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-36-0	
Arsenic, Dissolved	0.008	mg/L	0.002	SW6020	09/03/13 16:33	PER	7440-38-2	
Arsenic	0.011	mg/L	0.002	SW6020	09/03/13 16:31	PER	7440-38-2	
Barium, Dissolved	0.087	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-39-3	
Barium	0.088	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-39-3	
Boron, Dissolved	0.11	mg/L	0.04	SW6020	09/03/13 16:33	PER	7440-42-8	
Boron	0.11	mg/L	0.04	SW6020	09/03/13 16:31	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-48-4	
Copper, Dissolved	0.007	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-50-8	
Iron, Dissolved	2.34	mg/L	0.02	E200.8	09/03/13 16:33	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 16:33	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 16:31	PER	7439-92-1	
Manganese, Dissolved	0.051	mg/L	0.005	SW6020	09/03/13 16:33	PER	7439-96-5	
Manganese	0.060	mg/L	0.005	SW6020	09/03/13 16:31	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 14:55	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 14:54	CCM	7439-97-6	
Nickel, Dissolved	0.005	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-02-0	
Nickel	0.005	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:33	PER	7782-49-2	

Lab Sample ID: S57694.04 (continued)
Sample Tag: MW-02-01(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:31	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 16:33	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 16:31	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-62-2	
Zinc, Dissolved	0.006	mg/L	0.005	SW6020	09/03/13 16:33	PER	7440-66-6	
Zinc	0.010	mg/L	0.005	SW6020	09/03/13 16:31	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 18:34	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/27/13 18:34	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	87-68-3	

Lab Sample ID: S57694.04 (continued)
Sample Tag: MW-02-01(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 18:34	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 15:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 18:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 18:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 18:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	110-82-7	

Lab Sample ID: S57694.04 (continued)
Sample Tag: MW-02-01(3)(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 18:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 18:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 18:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:35	WAT	96-12-8	
Organics								
Methane in Water	7.5	ug/L	0.5	RSK-175	08/23/13 11:54	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57694.05
Sample Tag: Trip Blank(08192013)
Collected Date/Time: 08/19/2013 00:01
Matrix: Liquid
COC Reference: 75295

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 15:37	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 18:56	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 18:56	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 18:56	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 18:56	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 18:56	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	79-34-5	

Lab Sample ID: S57694.05 (continued)
Sample Tag: Trip Blank(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 18:56	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:56	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75295

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE
CITY: BRIGHTON STATE: MI ZIP CODE: 488 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8837
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B006448O.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE KOLLGEN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	ANALYSIS: TCL VOCs 1,4-DIOXANE 8260 SIM	TCL SVOCs	TAL METALS	HEXAVALENT CHROMIUM	METHANE	DISS FE & MN	DISS TAL METALS	SULFATE NITRATE ALKALINITY CO2		
57694.01	8/19/13	0938	MW-02-03(3)(08192013)	GW	7	3	3	1					X	X	X	X						
.02	8/19/13	1205	MW-02-04(3)(08192013)	GW	7	3	3	1					X	X	X	X						
.03	8/19/13	—	DUPE-04(08192013)	GW	6	2	3	1					X	X	X							
.04	8/19/13	1621	MW-02-01(3)(08192013)	GW	12	3	6	3					X	X	X		X	X	X	X		
.05	8/19/13	—	TRIP BLANK(08192013)		2		2						X									

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

RELINQUISHED BY: SIGNATURE/ORGANIZATION:	☐ Sampler	DATE: 8/19/13	TIME: 1730
RECEIVED BY: SIGNATURE/ORGANIZATION: STEVE STELTER		DATE: 8/19/13	TIME: 1730
RELINQUISHED BY: SIGNATURE/ORGANIZATION: Dropbox		DATE:	TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tallulah Fenwick		DATE: 8/20/13	TIME: 800

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Steve Stelter FME		DATE: 08/19/13	TIME: 1750
RECEIVED BY: SIGNATURE/ORGANIZATION: Merit		DATE: 08/19/13	TIME: 1750
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

August 28, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308364	08/21/2013	S57694

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308364**
Project:	Subcontract Lab Services	Description:	S57694
Client Sample ID:	**57694.04**	Sampled:	08/19/13 16:21
Lab Sample ID:	**1308364-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**7.5**	0.50	ug/L	1	RSK-175	08/23/13 11:54	JMF	1308807

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308807 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/23/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H23040	
Methane		33.0	**27.8**	84	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26.28

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75324

CHAIN OF CUSTODY RECORD

E. 13083164

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: S57694
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	
01	8/19	1621	S7694.04	GW	3		X						X	*Subject to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/20/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466477703 5825 2008 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8.21.13 TIME: 1150

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308304
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1
Thermometer Used: ☐ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Tm 3222	1330	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	4.1	-	4.1
2	4.5	-	4.5
3	4.2	-	4.2
Average °C			4.3

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☐	Chain of Custody record(s)? If No, Initiated By _____
☐	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☐	☐	Average sample temperature ≤6° C?
☐		☐	Was thermal preservation required?
☐	☐		If "No", Project Chemist Approval Intials: _____
☐	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐		Completed Sample Preservation Verification Form?
☐	☐		Samples chemically preserved correctly?
☐	☐		If "No", added orange tag?
☐	☐		Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☐	Sample ID matches COC?
☐	☐	Sample Date and Time matches COC?
☐		Container type completed on COC?
☐	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / No

Log In Forms - Receiving Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57696.01(01)
Generated on 09/04/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57696.01-S57696.04
Project: Racer Lansing Plant-3
Collected Date: 08/19/2013
Submitted Date/Time: 08/20/2013 08:00
Sampled by: Billy J Coben
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57696.01	MW-13-22(08192013)	Groundwater	08/19/2013 10:00
S57696.02	MW-12-21(08192013)	Groundwater	08/19/2013 12:35
S57696.03	MW-13-28(08192013)	Groundwater	08/19/2013 15:30
S57696.04	Trip Blank(08192013)	Groundwater	08/19/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57696.01
Sample Tag: MW-13-22(08192013)
Collected Date/Time: 08/19/2013 10:00
Matrix: Groundwater
COC Reference: 75385

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
3	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Inorganics								
Alkalinity as CaCO3	435	mg/L	1	2320B	08/20/13 15:24	JDP		
Carbon Dioxide	288	mg/L	10	4500-CO2C	08/20/13 09:19	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/20/13 11:36	JDP	14797-55-8	
Sulfate	669	mg/L	50	E300.0	08/20/13 13:21	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-36-0	
Arsenic, Dissolved	0.006	mg/L	0.002	SW6020	09/03/13 16:09	PER	7440-38-2	
Arsenic	0.008	mg/L	0.002	SW6020	09/03/13 16:07	PER	7440-38-2	
Barium, Dissolved	0.042	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-39-3	
Barium	0.051	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-39-3	
Boron, Dissolved	0.23	mg/L	0.04	SW6020	09/03/13 16:09	PER	7440-42-8	
Boron	0.24	mg/L	0.04	SW6020	09/03/13 16:07	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-43-9	
Chromium, Dissolved	0.006	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-47-3	
Chromium	0.009	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-50-8	
Iron, Dissolved	13.2	mg/L	0.02	E200.8	09/03/13 16:09	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 16:09	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 16:07	PER	7439-92-1	
Manganese, Dissolved	0.083	mg/L	0.005	SW6020	09/03/13 16:09	PER	7439-96-5	
Manganese	0.118	mg/L	0.005	SW6020	09/03/13 16:07	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:07	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:05	CCM	7439-97-6	
Nickel, Dissolved	0.023	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-02-0	
Nickel	0.027	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:09	PER	7782-49-2	

Lab Sample ID: S57696.01 (continued)
Sample Tag: MW-13-22(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:07	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 16:09	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 16:07	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:09	PER	7440-66-6	
Zinc	0.011	mg/L	0.005	SW6020	09/03/13 16:07	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 21:26	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/27/13 21:26	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/27/13 21:26	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	87-68-3	

Lab Sample ID: S57696.01 (continued)
Sample Tag: MW-13-22(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 21:26	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	240	ug/L	30	SW8260B - SIM	08/21/13 21:04	WAT	123-91-1	Y
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 21:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 21:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 21:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	71-55-6	

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S57696.01 (continued)
Sample Tag: MW-13-22(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 21:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 21:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 21:01	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:01	WAT	96-12-8	
Organics								
Methane in Water	7.3	ug/L	0.5	RSK-175	08/27/13 10:57	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57696.02
Sample Tag: MW-12-21(08192013)
Collected Date/Time: 08/19/2013 12:35
Matrix: Groundwater
COC Reference: 75385

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
3	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Inorganics								
Alkalinity as CaCO3	558	mg/L	1	2320B	08/20/13 15:26	JDP		
Carbon Dioxide	234	mg/L	10	4500-CO2C	08/20/13 09:35	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/20/13 11:48	JDP	14797-55-8	
Sulfate	992	mg/L	100	E300.0	08/20/13 13:33	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020	09/03/13 16:12	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020	09/03/13 16:10	PER	7440-38-2	
Barium, Dissolved	0.033	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-39-3	
Barium	0.064	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-39-3	
Boron, Dissolved	0.43	mg/L	0.04	SW6020	09/03/13 16:12	PER	7440-42-8	
Boron	0.42	mg/L	0.04	SW6020	09/03/13 16:10	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-43-9	
Chromium, Dissolved	0.007	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-47-3	
Chromium	0.019	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-48-4	
Cobalt	0.006	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-48-4	
Copper, Dissolved	0.037	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-50-8	
Copper	0.509	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-50-8	
Iron, Dissolved	10.1	mg/L	0.02	E200.8	09/03/13 16:12	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 16:12	PER	7439-92-1	
Lead	0.004	mg/L	0.003	SW6020	09/03/13 16:10	PER	7439-92-1	
Manganese, Dissolved	0.298	mg/L	0.005	SW6020	09/03/13 16:12	PER	7439-96-5	
Manganese	0.439	mg/L	0.005	SW6020	09/03/13 16:10	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:11	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:09	CCM	7439-97-6	
Nickel, Dissolved	0.066	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-02-0	
Nickel	0.074	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:12	PER	7782-49-2	

Lab Sample ID: S57696.02 (continued)
Sample Tag: MW-12-21(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:10	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 16:12	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 16:10	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-62-2	
Vanadium	0.010	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-62-2	
Zinc, Dissolved	0.100	mg/L	0.005	SW6020	09/03/13 16:12	PER	7440-66-6	
Zinc	0.201	mg/L	0.005	SW6020	09/03/13 16:10	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 22:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/27/13 22:00	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	87-68-3	

Lab Sample ID: S57696.02 (continued)
Sample Tag: MW-12-21(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 22:00	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	450	ug/L	50	SW8260B - SIM	08/21/13 21:22	WAT	123-91-1	Y
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	76-13-1	
Acetone	10	ug/L	10	SW8260B	08/23/13 21:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 21:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 21:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	71-55-6	

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S57696.02 (continued)
Sample Tag: MW-12-21(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 21:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 21:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 21:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:22	WAT	96-12-8	
Organics								
Methane in Water	3.5	ug/L	0.5	RSK-175	08/27/13 11:56	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57696.03
Sample Tag: MW-13-28(08192013)
Collected Date/Time: 08/19/2013 15:30
Matrix: Groundwater
COC Reference: 75385

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
Metal Digestion	Completed			3015A	09/03/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:30	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020	09/03/13 16:16	PER	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020	09/03/13 16:14	PER	7440-38-2	
Barium, Dissolved	0.038	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-39-3	
Barium	0.086	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-39-3	
Boron, Dissolved	0.08	mg/L	0.04	SW6020	09/03/13 16:16	PER	7440-42-8	
Boron	0.09	mg/L	0.04	SW6020	09/03/13 16:14	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/03/13 16:16	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/03/13 16:14	PER	7439-92-1	
Manganese, Dissolved	0.010	mg/L	0.005	SW6020	09/03/13 16:16	PER	7439-96-5	
Manganese	0.014	mg/L	0.005	SW6020	09/03/13 16:14	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:23	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:21	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-02-0	
Nickel	0.009	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:16	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/03/13 16:14	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/03/13 16:16	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/03/13 16:14	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-62-2	
Zinc, Dissolved	0.005	mg/L	0.005	SW6020	09/03/13 16:16	PER	7440-66-6	
Zinc	0.013	mg/L	0.005	SW6020	09/03/13 16:14	PER	7440-66-6	

Lab Sample ID: S57696.03 (continued)
Sample Tag: MW-13-28(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 22:35	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/27/13 22:35	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/27/13 22:35	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	88-75-5	

Lab Sample ID: S57696.03 (continued)
Sample Tag: MW-13-28(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	98-95-3	
di-n-Octyl phthalate	3	ug/L	1	SW8270C	08/27/13 22:35	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	85-01-8	
Phenol	2	ug/L	1	SW8270C	08/27/13 22:35	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 22:35	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 17:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	76-13-1	
Acetone	38	ug/L	10	SW8260B	08/23/13 21:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 21:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 21:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 21:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 21:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	108-87-2	

Lab Sample ID: S57696.03 (continued)
Sample Tag: MW-13-28(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 21:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:42	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57696.04
Sample Tag: Trip Blank(08192013)
Collected Date/Time: 08/19/2013 00:01
Matrix: Groundwater
COC Reference: 75385

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/20/13 10:45	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/20/13 20:51	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 22:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 22:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 22:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 22:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 22:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	79-34-5	

Lab Sample ID: S57696.04 (continued)
Sample Tag: Trip Blank(08192013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 22:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 22:03	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75385

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8599 FAX NO.: 810-229-8837
P.O. NO.: B00614500.2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM
QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING PLANT-3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COBERN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER 3B 8-19-13

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1W-D SIMS	TCL SVOC	TAL METALS	TAL METALS (DISSOLVED)	SULFATE, NITRATE, CO2, ALKALINITY	METHANE	DISSOLVED Fe & Mn				
57696.01	8/19/13	10:00	MW-13-22 (08192013)	GW	12	3	6	3					3	2	1	1	1	3	1				
.02	8/19/13	12:35	MW-12-21 (08192013)	GW	12	3	6	3					3	2	1	1	1	3	1				
.03	8/19/13	15:30	MW-13-28 (08192013)	GW	8 7	2	3	2					3	2	1	1							
.04	—	—	TRIP BLANK (08192013)	GW	2		2						2										

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	BC ARCADIS ☒ Sampler	8-19-13	17:15
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	STEVE STELTER PWS	8/19/13	17:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	DROPBOX		
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	TALWINDER PANNU	8/20/13	2:00

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	STEVE STELTER PWS	8/19/13	17:50
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	MERIT LABS	8/19/13	17:50

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 03, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308366	08/21/2013	S57696

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308366**
Project:	Subcontract Lab Services	Description:	S57696
Client Sample ID:	**57696.01**	Sampled:	08/19/13 10:00
Lab Sample ID:	**1308366-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**7.3**	0.50	ug/L	1	RSK-175	08/27/13 10:57	JMF	1308930

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308366**
Project:	Subcontract Lab Services	Description:	S57696
Client Sample ID:	**57696.02**	Sampled:	08/19/13 12:35
Lab Sample ID:	**1308366-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**3.5**	0.50	ug/L	1	RSK-175	08/27/13 11:56	JMF	1308930

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL	
QC Batch: 1308930 Method-Specific Extraction/RSK-175									
Method Blank					Analyzed:		08/27/2013		By: JMF
Unit: ug/L					Analytical Batch:		3H29004		
Methane			<0.50			--		0.50	
Laboratory Control Sample					Analyzed:		08/27/2013		By: JMF
Unit: ug/L					Analytical Batch:		3H29004		
Methane		33.0	**36.3**	110	70-116	--		0.50	
Matrix Spike 1308366-01 57696.01					Analyzed:		08/27/2013		By: JMF
Unit: ug/L					Analytical Batch:		3H29004		
Methane	7.31	33.0	**35.8**	86	42-112	--		0.50	
Matrix Spike Duplicate 1308366-01 57696.01					Analyzed:		08/27/2013		By: JMF
Unit: ug/L					Analytical Batch:		3H29004		
Methane	7.31	33.0	**34.0**	81	42-112	5	20	0.50	

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26.30

Merit Laboratories, Inc.

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C.O.C. PAGE # _____ OF _____

75326

CHAIN OF CUSTODY RECORD

E·130836

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557696
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	
01	8/19	1000	57696.01	GW	3		X						X	
02	↓	1235	57696.02	↓	↓		↓						X	*Subcd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/20/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466477 03 5625 2008 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8·21·13 TIME: 1150

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

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5560 Corporate Exchange Court SE ◆ Grand Rapids, MI 49512 ◆ 616.975.4500 ◆ Fax 616.942.7463 ◆ www.trimatrixlabs.com

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1309316

Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13

☑ Cooler ☐ Box ☐ Other ____ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (# ____) ☐ See Additional Cooler Information Form

Cooler #	Time
Tm 3222	1330

Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	4.1	-	4.1
2	4.5	-	4.5
3	4.2	-	4.2
Average °C			4.3

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #	Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #	Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler #	Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☑	Chain of Custody record(s)? If No, Initiated By ____
☐	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other ____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☑	Sample ID matches COC?
☐	☑	Sample Date and Time matches COC?
☐		Container type completed on COC?
☐	☑	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☐	☐	Average sample temperature ≤6° C?
☐	☐	☐	Was thermal preservation required?
☐	☐		If "No", Project Chemist Approval Intials: ____
☐	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐		Completed Sample Preservation Verification Form?
☐	☐	☐	Samples chemically preserved correctly?
☐	☐		If "No", added orange tag?
☐	☐	☐	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / No

Log In Forms - Receiving Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57704.01(01)
Generated on 09/05/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57704.01-S57704.03
Project: B0064480.2013
Collected Date: 08/20/2013
Submitted Date/Time: 08/20/2013 13:35
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57704.01	P3-SB-07 (08202013)	Groundwater	08/20/2013 09:25
S57704.02	MW-02-02 (3) (08202013)	Groundwater	08/20/2013 11:57
S57704.03	Trip Blank (08202013)	Liquid	08/20/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57704.01
Sample Tag: P3-SB-07 (08202013)
Collected Date/Time: 08/20/2013 09:25
Matrix: Groundwater
COC Reference: 75296

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
2	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
1	125ml Plastic	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	307	mg/L	1	2320B	08/20/13 15:42	JDP		
Carbon Dioxide	135	mg/L	10	4500-CO2C	08/21/13 09:20	JDP		
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	08/20/13 16:29	MJC	18540-29-9	
Nitrate-N	20.9	mg/L	1.0	E300.0	08/21/13 13:20	JDP	14797-55-8	
Sulfate	178	mg/L	10	E300.0	08/21/13 13:20	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	09/04/13 15:52	PER	7440-38-2	
Barium	0.058	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-39-3	
Boron	0.91	mg/L	0.04	SW6020	09/04/13 15:52	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-50-8	
Iron, Dissolved	0.50	mg/L	0.02	E200.8	09/04/13 15:54	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 15:52	PER	7439-92-1	
Manganese, Dissolved	0.012	mg/L	0.005	E200.8	09/04/13 15:54	PER	7439-96-5	
Manganese	0.016	mg/L	0.005	SW6020	09/04/13 15:52	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:08	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 15:52	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 15:52	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020	09/04/13 15:52	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	120-12-7	

Lab Sample ID: S57704.01 (continued)
Sample Tag: P3-SB-07 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 16:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/28/13 16:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	621-64-7	

Lab Sample ID: S57704.01 (continued)
Sample Tag: P3-SB-07 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 16:50	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 20:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 14:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 14:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 14:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 14:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 14:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	79-00-5	

Lab Sample ID: S57704.01 (continued)
Sample Tag: P3-SB-07 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 14:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 14:23	WAT	96-12-8	
Organics								
Methane in Water	Not detected	ug/L	0.5	RSK-175	08/28/13 14:45	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57704.02
Sample Tag: MW-02-02 (3) (08202013)
Collected Date/Time: 08/20/2013 11:57
Matrix: Groundwater
COC Reference: 75296

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
2	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR
1	125ml Plastic	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	410	mg/L	1	2320B	08/20/13 15:44	JDP		
Carbon Dioxide	277	mg/L	10	4500-CO2C	08/21/13 09:22	JDP		
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	08/20/13 16:35	MJC	18540-29-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/21/13 11:50	JDP	14797-55-8	
Sulfate	364	mg/L	20	E300.0	08/21/13 13:45	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020	09/04/13 15:56	PER	7440-38-2	
Barium	0.099	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	09/04/13 15:56	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-47-3	
Cobalt	0.008	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-50-8	
Iron, Dissolved	3.80	mg/L	0.02	E200.8	09/04/13 15:59	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 15:56	PER	7439-92-1	
Manganese, Dissolved	1.33	mg/L	0.005	E200.8	09/04/13 15:59	PER	7439-96-5	
Manganese	1.39	mg/L	0.005	SW6020	09/04/13 15:56	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:10	CCM	7439-97-6	
Nickel	0.038	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 15:56	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 15:56	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-62-2	
Zinc	0.015	mg/L	0.005	SW6020	09/04/13 15:56	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	120-12-7	

Lab Sample ID: S57704.02 (continued)
Sample Tag: MW-02-02 (3) (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 17:24	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/28/13 17:24	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	621-64-7	

Lab Sample ID: S57704.02 (continued)
Sample Tag: MW-02-02 (3) (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 17:24	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 20:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 14:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 14:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 14:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 14:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 14:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	79-00-5	

Lab Sample ID: S57704.02 (continued)
Sample Tag: MW-02-02 (3) (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 14:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 14:43	WAT	96-12-8	
Organics								
Methane in Water	3.2	ug/L	0.5	RSK-175	08/28/13 15:02	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57704.03
Sample Tag: Trip Blank (08202013)
Collected Date/Time: 08/20/2013 00:01
Matrix: Liquid
COC Reference: 75296

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:30	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 20:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 15:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 15:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 15:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 15:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 15:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	79-34-5	

Lab Sample ID: S57704.03 (continued)
Sample Tag: Trip Blank (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 15:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 15:03	WAT	96-12-8	

September 03, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308370	08/21/2013	S57704

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308370**
Project:	Subcontract Lab Services	Description:	S57704
Client Sample ID:	**57704.01**	Sampled:	08/20/13 09:25
Lab Sample ID:	**1308370-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	<0.50	0.50	ug/L	1	RSK-175	08/28/13 14:45	JMF	1309067

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308370**
Project:	Subcontract Lab Services	Description:	S57704
Client Sample ID:	**57704.02**	Sampled:	08/20/13 11:57
Lab Sample ID:	**1308370-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**3.2**	0.50	ug/L	1	RSK-175	08/28/13 15:02	JMF	1309067

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL	
QC Batch: 1309067 Method-Specific Extraction/RSK-175									
Method Blank					Analyzed:		08/28/2013		By: JMF
Unit: ug/L					Analytical Batch:		3H29005		
Methane			<0.50			--		0.50	
Laboratory Control Sample					Analyzed:		08/28/2013		By: JMF
Unit: ug/L					Analytical Batch:		3H29005		
Methane		33.0	**33.2**	100	70-116	--		0.50	
Matrix Spike 1308370-01 57704.01					Analyzed:		08/28/2013		By: JMF
Unit: ug/L					Analytical Batch:		3H29005		
Methane	0.240	33.0	**29.8**	89	42-112	--		0.50	
Matrix Spike Duplicate 1308370-01 57704.01					Analyzed:		08/28/2013		By: JMF
Unit: ug/L					Analytical Batch:		3H29005		
Methane	0.240	33.0	**29.1**	87	42-112	2	20	0.50	

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26.34

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75460

CHAIN OF CUSTODY RECORD E-1308370

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 857704
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane
	6/20	925	57704.01	GW	3		X						X
	↓	1157	57704.02	↓	↓		↓						↓

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler	DATE: 6/20/13	TIME: 1600	RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: IZ 466 477 03 5825 2008	DATE:	TIME:	RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE: 6.21.13	TIME: 1150
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	SEAL NO.: SEAL INTACT YES ☐ NO ☐	INITIALS:	NOTES: TEMP. ON ARRIVAL _____
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	SEAL NO.: SEAL INTACT YES ☐ NO ☐	INITIALS:	

TRIMATRIX LABORATORIES

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Individual sample results relate only to the sample tested.

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308370
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☐ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☐ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Im 3222	1330	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C	TB location: Representative / Not Representative
Temp Blank:			
1 4.1	-	4.1	
2 4.5	-	4.5	
3 4.2	-	4.2	
	Average °C	4.3	

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C	TB location: Representative / Not Representative
Temp Blank:			
1			
2			
3			
	Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C	TB location: Representative / Not Representative
Temp Blank:			
1			
2			
3			
	Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C	TB location: Representative / Not Representative
Temp Blank:			
1			
2			
3			
	Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☐	Chain of Custody record(s)? If No, Initiated By _____
☐	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
☐	☐	☐	Average sample temperature ≤6° C?
☐	☐	☐	Was thermal preservation required?
☐	☐	☐	If "No", Project Chemist Approval Intials: _____
☐	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐	☐	Completed Sample Preservation Verification Form?
☐	☐	☐	Samples chemically preserved correctly?
☐	☐	☐	If "No", added orange tag?
☐	☐	☐	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☐	Sample ID matches COC?
☐	☐	Sample Date and Time matches COC?
☐	☐	Container type completed on COC?
☐	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75296

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DR
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE KONAGEN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TLC VOCs 1,4-Dioxane 8260 SIM	TLC SVOCs	TAL Metals	Hexavalent Chromium	Methane	Dissolved Fe & Mn	Sulfate, Nitrate, CO2, Alkalinity			
577704.01	8/20/13	0925	P3-SB-07 (08202013)	GW	12	4	6	2					X	X	X	X	X	X	X			
.02	8/20/13	1157	MW-02-02(3)(08202013)	GW	12	4	6	2					X	X	X	X	X	X	X			
.03	8/20/13	—	TRIP BLANK (08202013)		1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☐ Sampler DATE 8/20/13 TIME 1245
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 8/20/13 TIME 1245
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE 8/20/13 TIME 1245
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 8/20/13 TIME 1335

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57705.01(01)
Generated on 09/05/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57705.01-S57705.03
Project: Racer Lansing Plant-3
Collected Date: 08/20/2013
Submitted Date/Time: 08/20/2013 13:35
Sampled by: Billy J Coben
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57705.01	MW-13-23 (08202013)	Groundwater	08/20/2013 10:30
S57705.02	MW-13-25 (08202013)	Groundwater	08/20/2013 12:30
S57705.03	Trip Blank (08202013)	Liquid	08/20/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57705.01
Sample Tag: MW-13-23 (08202013)
Collected Date/Time: 08/20/2013 10:30
Matrix: Groundwater
COC Reference: 75447

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
9	40ml Glass	HCL	Yes	4.5	IR
4	1L Amber	None	Yes	4.5	IR
3	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	423	mg/L	1	2320B	08/20/13 15:46	JDP		
Carbon Dioxide	282	mg/L	10	4500-CO2C	08/21/13 09:24	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/21/13 12:03	JDP	14797-55-8	
Sulfate	1,030	mg/L	500	E300.0	08/21/13 13:58	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	09/04/13 16:34	PER	7440-38-2	
Barium	0.032	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-39-3	
Boron	0.34	mg/L	0.04	SW6020	09/04/13 16:34	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-47-3	
Cobalt	0.005	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-48-4	
Copper	0.012	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-50-8	
Iron, Dissolved	1.79	mg/L	0.02	E200.8	09/04/13 16:38	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 16:34	PER	7439-92-1	
Manganese, Dissolved	1.24	mg/L	0.005	E200.8	09/04/13 16:38	PER	7439-96-5	
Manganese	1.24	mg/L	0.005	SW6020	09/04/13 16:34	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:12	CCM	7439-97-6	
Nickel	0.040	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 16:34	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 16:34	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-62-2	
Zinc	0.025	mg/L	0.005	SW6020	09/04/13 16:34	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	92-52-4	

Lab Sample ID: S57705.01 (continued)
Sample Tag: MW-13-23 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 17:58	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/28/13 17:58	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/28/13 17:58	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	91-20-3	

Lab Sample ID: S57705.01 (continued)
Sample Tag: MW-13-23 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 17:58	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 14:04	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 20:33	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 20:33	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 20:33	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 20:33	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 20:33	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	124-48-1	

Lab Sample ID: S57705.01 (continued)
Sample Tag: MW-13-23 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 20:33	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 20:33	WAT	96-12-8	
Organics								
Methane in Water	8.1	ug/L	0.5	RSK-175	08/28/13 15:06	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57705.02
Sample Tag: MW-13-25 (08202013)
Collected Date/Time: 08/20/2013 12:30
Matrix: Groundwater
COC Reference: 75447

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
2	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	528	mg/L	1	2320B	08/20/13 15:48	JDP		
Carbon Dioxide	336	mg/L	10	4500-CO2C	08/21/13 09:26	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/21/13 12:15	JDP	14797-55-8	
Sulfate	1,400	mg/L	1,000	E300.0	08/21/13 14:11	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-36-0	
Arsenic	0.022	mg/L	0.002	SW6020	09/04/13 16:48	PER	7440-38-2	
Barium	0.033	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	09/04/13 16:48	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-48-4	
Copper	0.007	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-50-8	
Iron, Dissolved	14.2	mg/L	0.02	E200.8	09/04/13 16:50	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 16:48	PER	7439-92-1	
Manganese, Dissolved	0.813	mg/L	0.005	E200.8	09/04/13 16:50	PER	7439-96-5	
Manganese	0.856	mg/L	0.005	SW6020	09/04/13 16:48	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:14	CCM	7439-97-6	
Nickel	0.040	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020	09/04/13 16:48	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 16:48	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-62-2	
Zinc	0.015	mg/L	0.005	SW6020	09/04/13 16:48	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	92-52-4	

Lab Sample ID: S57705.02 (continued)
Sample Tag: MW-13-25 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 18:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	132-64-9	
Diethyl phthalate	1	ug/L	1	SW8270C	08/28/13 18:33	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/28/13 18:33	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	91-20-3	

Lab Sample ID: S57705.02 (continued)
Sample Tag: MW-13-25 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 18:33	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	14	ug/L	5	SW8260B - SIM	08/22/13 14:22	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 20:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 20:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 20:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 20:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 20:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	124-48-1	

Lab Sample ID: S57705.02 (continued)
Sample Tag: MW-13-25 (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 20:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 20:53	WAT	96-12-8	
Organics								
Methane in Water	4.3	ug/L	0.5	RSK-175	08/28/13 15:10	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57705.03
Sample Tag: Trip Blank (08202013)
Collected Date/Time: 08/20/2013 00:01
Matrix: Liquid
COC Reference: 75447

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 14:40	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/22/13 21:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/22/13 21:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/22/13 21:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/22/13 21:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/22/13 21:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	79-34-5	

Lab Sample ID: S57705.03 (continued)
Sample Tag: Trip Blank (08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/22/13 21:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/22/13 21:14	WAT	96-12-8	

September 03, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308371	08/21/2013	S57705

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308371**
Project:	Subcontract Lab Services	Description:	S57705
Client Sample ID:	**57705.01**	Sampled:	08/20/13 10:30
Lab Sample ID:	**1308371-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**8.1**	0.50	ug/L	1	RSK-175	08/28/13 15:06	JMF	1309067

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308371**
Project:	Subcontract Lab Services	Description:	S57705
Client Sample ID:	**57705.02**	Sampled:	08/20/13 12:30
Lab Sample ID:	**1308371-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**4.3**	0.50	ug/L	1	RSK-175	08/28/13 15:10	JMF	1309067

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309067 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/28/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29005	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/28/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29005	
Methane		33.0	**33.2**	100	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26.35

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75462

CHAIN OF CUSTODY RECORD E. 1308371

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teagle SAME: X
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/20	1030	57705.01	GW	3		X						X	
02	↓	1230	57705.02	↓	↓		X						X	*Subcl to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler	DATE: 8/20/13	TIME: 1600	RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: IZ 466477 03 5825 2008	DATE:	TIME:	RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE: 8.21.13	TIME: 1150
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308371
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Im 3222	1330	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1 4.1	-	4.1
2 4.5	-	4.5
3 4.2	-	4.2
Average °C		4.3

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☐	Chain of Custody record(s)? If No, Initiated By _____
☐	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
☐	☐	☐	Average sample temperature ≤6° C?
☐	☐	☐	Was thermal preservation required?
☐	☐	☐	If "No", Project Chemist Approval Intials: _____
☐	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐	☐	Completed Sample Preservation Verification Form?
☐	☐	☐	Samples chemically preserved correctly?
☐	☐	☐	If "No", added orange tag?
☐	☐	☐	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☐	Sample ID matches COC?
☐	☐	Sample Date and Time matches COC?
☐	☐	Container type completed on COC?
☐	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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C.O.C. PAGE # 1 OF 1

75447

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DR SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8837 P.O. NO.: B00644480.2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER CANTON PLANT-3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COGAN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1,4-D SIMS	TCL SVOC	TAL METALS	DISSOLVED Fe, Mn	SULFATE, NITRATE, CO2 ALKALINITY	METHANE	DISSOLVED TAL METALS				Special Instructions
57705.01	8/20/13	10:30	MW-13-23 (08202013)	GW	11	5	9	4					6	4	2	1	1	3					MS/MSD (1 bottles)
.02	8/20/13	12:30	MW-13-25 (08202013)	GW	11	3	6	2					3	2	1	1	1	3					
.03	—	—	TRIP BLANK (08202013)	L	2		2						2										

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS	Sampler DATE 8-20-13	TIME 12:55
RECEIVED BY: SIGNATURE/ORGANIZATION	FMC	DATE 8/20/13	TIME 1255
RELINQUISHED BY: SIGNATURE/ORGANIZATION	FMC	DATE 8/20/13	TIME 1255
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8/20/13	TIME 1253

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Talunton Fauet	DATE 8/20/13	TIME 1335
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57727.01(01)
Generated on 09/05/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57727.01-S57727.03
Project: Plant 6/B0064481.2013.00603
Collected Date: 08/20/2013
Submitted Date/Time: 08/21/2013 09:30
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57727.01	P6-MW-01	Groundwater	08/20/2013 15:15
S57727.02	EQ-BLANK#5	Liquid	08/20/2013 15:30
S57727.03	TRIP BLANK	Liquid	08/20/2013 14:00

Analytical Laboratory Report

Lab Sample ID: S57727.01
Sample Tag: P6-MW-01
Collected Date/Time: 08/20/2013 15:15
Matrix: Groundwater
COC Reference: 75310

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
2	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	356	mg/L	1	2320B	08/23/13 10:08	JDP		
Carbon Dioxide	168	mg/L	10	4500-CO2C	08/21/13 10:30	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 10:38	JDP	14797-55-8	
Sulfate	346	mg/L	20	E300.0	08/22/13 12:46	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-36-0	
Arsenic	0.013	mg/L	0.002	SW6020	09/04/13 17:15	PER	7440-38-2	
Barium	0.083	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020	09/04/13 17:15	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-50-8	
Iron, Dissolved	2.62	mg/L	0.02	E200.8	09/04/13 17:17	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 17:15	PER	7439-92-1	
Manganese, Dissolved	0.478	mg/L	0.005	E200.8	09/04/13 17:17	PER	7439-96-5	
Manganese	0.459	mg/L	0.005	SW6020	09/04/13 17:15	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:28	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 17:15	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 17:15	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020	09/04/13 17:15	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	92-52-4	

Lab Sample ID: S57727.01 (continued)
Sample Tag: P6-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 19:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/28/13 19:07	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	91-20-3	

Lab Sample ID: S57727.01 (continued)
Sample Tag: P6-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 19:07	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 15:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 16:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	124-48-1	

Lab Sample ID: S57727.01 (continued)
Sample Tag: P6-MW-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 16:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:51	WAT	96-12-8	
Organics								
Methane in Water	90	ug/L	1.0	RSK-175	08/29/13 10:53	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57727.02
Sample Tag: EQ-BLANK#5
Collected Date/Time: 08/20/2013 15:30
Matrix: Liquid
COC Reference: 75310

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/04/13 16:30	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/04/13 16:30	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 16:30	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:30	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 16:30	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/04/13 16:30	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	91-58-7	

Lab Sample ID: S57727.02 (continued)
Sample Tag: EQ-BLANK#5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 19:41	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/28/13 19:41	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 19:41	PL	118-74-1	

Lab Sample ID: S57727.02 (continued)
Sample Tag: EQ-BLANK#5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 15:36	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 17:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 17:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 17:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 17:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 17:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 17:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	120-82-1	

Lab Sample ID: S57727.02 (continued)
Sample Tag: EQ-BLANK#5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:11	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57727.03
Sample Tag: TRIP BLANK
Collected Date/Time: 08/20/2013 14:00
Matrix: Liquid
COC Reference: 75310

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 15:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 17:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 17:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 17:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 17:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 17:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	79-34-5	

Lab Sample ID: S57727.03 (continued)
Sample Tag: TRIP BLANK

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 17:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:31	WAT	96-12-8	

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308429	08/22/2013	S57727

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308429**
Project:	Subcontract Lab Services	Description:	S57727
Client Sample ID:	**57727.01**	Sampled:	08/20/13 15:15
Lab Sample ID:	**1308429-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**90**	1.0	ug/L	2	RSK-175	08/29/13 10:53	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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27-10

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308429

75464

CHAIN OF CUSTODY RECORD

Rack #116 White

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 55772? SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
#	8/20	1515	55772.01	GW	3		X						X	-01
														*subid to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/21/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 17 466477 03 5973 1033 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8/22/13 TIME: 1245
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
NOTES: TEMP. ON ARRIVAL: _____

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Individual sample results relate only to the sample tested.

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308429
Receipt Record Page/Line #: | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): LR 8/22/13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) | ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler 1	Cooler 2	Cooler 3	Cooler 4
Cooler # / Time	Client (RUSH) / 1355			
Custody Seals	☑ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C				
Temp Blank:				
TB location: Representative / Not Representative				
1	4.9 – 4.9			
2	4.9 – 4.9			
3	5.1 – 5.1			
Average °C	5.0			
☐ Cooler ID on COC?				
☐ VOC Trip Blank received?				

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐	☐	If "No", Project Chemist Approval Intials: _____
☑	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐	☐	Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐	☐	If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/22/13 1245	8/22/13 1414	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist revision: 3.4

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Phone (517) 332-0167 Fax (517) 332-4034
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C.O.C. PAGE # 1 OF 1

75310

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 Citation DR Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8857 P.O. NO.:
E-MAIL ADDRESS: LANCE.Rogers@ARCADIS-US.com QUOTE NO.:

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: Plant 6 / B00644481.2013.00603 SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL Vac, 1,4-D, Styrene	TCL SVOC's	THM metals	Diss Fe, Mn	Sulfate, Methane	Co2, Alkalinity	Methane	Diss metals
57727.01	8/20	1515	PG-MW-01	GW	11	3	6	2					X	X	X	X	X	X	X	
.02	8/20	1530	EQ-BLANK #5	L	6	2	3	1					X	X	X					
.03	8/20	1400	TRIP BLANK	L	1		1						X							

S S

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Steve Stelter / Arcadis Sampler DATE: 8/20/13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: TM Storage DATE: 8/20/13 TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Mer DATE: 8-21-13 TIME: 845

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Mer DATE: 8-21-13 TIME: 9:30
RECEIVED BY: SIGNATURE/ORGANIZATION: Barbara Ball DATE: 8/21/13 TIME: 9:30

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57728.01(01)
Generated on 09/05/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57728.01-S57728.03
Project: B0064480.2013
Collected Date: 08/20/2013
Submitted Date/Time: 08/21/2013 09:30
Sampled by: Unknown
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57728.01	MW-04-01(3)(08202013)	Groundwater	08/20/2013 14:23
S57728.02	P3-SB-28(08202013)	Groundwater	08/20/2013 16:33
S57728.03	TRIP BLANK(08202013)	Liquid	08/20/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57728.01
Sample Tag: MW-04-01(3)(08202013)
Collected Date/Time: 08/20/2013 14:23
Matrix: Groundwater
COC Reference: 75294

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
2	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	281	mg/L	1	2320B	08/23/13 10:10	JDP		
Carbon Dioxide	164	mg/L	10	4500-CO2C	08/21/13 10:32	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 10:50	JDP	14797-55-8	
Sulfate	99	mg/L	5	E300.0	08/22/13 10:50	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020	09/04/13 16:51	PER	7440-38-2	
Barium	0.047	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020	09/04/13 16:51	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-48-4	
Copper	0.006	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-50-8	
Iron, Dissolved	1.35	mg/L	0.02	E200.8	09/04/13 16:53	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 16:51	PER	7439-92-1	
Manganese, Dissolved	0.019	mg/L	0.005	E200.8	09/04/13 16:53	PER	7439-96-5	
Manganese	0.021	mg/L	0.005	SW6020	09/04/13 16:51	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:32	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 16:51	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 16:51	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/04/13 16:51	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	92-52-4	

Lab Sample ID: S57728.01 (continued)
Sample Tag: MW-04-01(3)(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 20:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/28/13 20:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	91-20-3	

Lab Sample ID: S57728.01 (continued)
Sample Tag: MW-04-01(3)(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 20:16	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 16:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 17:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 17:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 17:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 17:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 17:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	124-48-1	

Lab Sample ID: S57728.01 (continued)
Sample Tag: MW-04-01(3)(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 17:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 17:51	WAT	96-12-8	
Organics								
Methane in Water	4.6	ug/L	0.5	RSK-175	08/29/13 11:07	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57728.02
Sample Tag: P3-SB-28(08202013)
Collected Date/Time: 08/20/2013 16:33
Matrix: Groundwater
COC Reference: 75294

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
2	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR
1	125ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	170	mg/L	1	2320B	08/23/13 10:12	JDP		
Carbon Dioxide	83	mg/L	10	4500-CO2C	08/21/13 10:34	JDP		
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	08/21/13 17:35	MJC	18540-29-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 11:03	JDP	14797-55-8	
Sulfate	23	mg/L	5	E300.0	08/22/13 11:03	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	09/04/13 16:55	PER	7440-38-2	
Barium	0.036	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-39-3	
Boron	0.27	mg/L	0.04	SW6020	09/04/13 16:55	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-50-8	
Iron, Dissolved	0.17	mg/L	0.02	E200.8	09/04/13 17:00	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 16:55	PER	7439-92-1	
Manganese, Dissolved	0.273	mg/L	0.005	E200.8	09/04/13 17:00	PER	7439-96-5	
Manganese	0.257	mg/L	0.005	SW6020	09/04/13 16:55	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:34	CCM	7439-97-6	
Nickel	0.006	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 16:55	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 16:55	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/04/13 16:55	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	120-12-7	

Lab Sample ID: S57728.02 (continued)
Sample Tag: P3-SB-28(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 20:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/28/13 20:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/28/13 20:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	621-64-7	

Lab Sample ID: S57728.02 (continued)
Sample Tag: P3-SB-28(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 20:50	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 16:32	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 18:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 18:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 18:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 18:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 18:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	79-00-5	

Lab Sample ID: S57728.02 (continued)
Sample Tag: P3-SB-28(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 18:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:11	WAT	96-12-8	
Organics								
Methane in Water	1,300	ug/L	50	RSK-175	08/29/13 11:29	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57728.03
Sample Tag: TRIP BLANK(08202013)
Collected Date/Time: 08/20/2013 00:01
Matrix: Liquid
COC Reference: 75294

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 16:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 18:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 18:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 18:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 18:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 18:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	79-34-5	

Lab Sample ID: S57728.03 (continued)
Sample Tag: TRIP BLANK(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 18:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:31	WAT	96-12-8	

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308431	08/22/2013	S57728

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308431**
Project:	Subcontract Lab Services	Description:	S57728
Client Sample ID:	**57728.01**	Sampled:	08/20/13 14:23
Lab Sample ID:	**1308431-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**4.6**	0.50	ug/L	1	RSK-175	08/29/13 11:07	JMF	1309108

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308431**
Project:	Subcontract Lab Services	Description:	S57728
Client Sample ID:	**57728.02**	Sampled:	08/20/13 16:33
Lab Sample ID:	**1308431-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**1300**	50	ug/L	100	RSK-175	08/29/13 11:29	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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27-12

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2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308431 75466

CHAIN OF CUSTODY RECORD

Rack #116 White

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Feage SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557728
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
-01	8/20	1423	57728.01	GW	3		X						X	
-02	↓	1633	57728.02	↓	↓		↓						X	* Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/21/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5973 1033 DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Lyn Romeyn DATE: 8/22/13 TIME: 1245
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit — Work Order #: 1308431
Receipt Record Page/Line #: — New / Add To: — Project Chemist: — Sample #s:

Recorded by (initials/date): LR 8/22/13

☑ Cooler ☐ Box ☐ Other ____ — Qty Received: 1

Thermometer Used: ☒ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) — ☐ See Additional Cooler Information Form

Cooler # 1 (Client) (RUSH) — Time: 1355

Custody Seals:
- ☒ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location:
- Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☒ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	4.9	-	4.9
2	4.9	-	4.9
3	5.1	-	5.1
Average °C			5.0

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # ____ — Time: ____

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location:
- Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # ____ — Time: ____

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location:
- Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # ____ — Time: ____

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location:
- Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☒	☐	Chain of Custody record(s)? If No, Initiated By ____
☒	☐	Received for Lab Signed/Date/Time?
☒	☐	Shipping document?
☐	☒	Other ____

COC Information

☐ TriMatrix COC ☒ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☒	☐	Average sample temperature ≤6° C?
☒	☐	☐	Was thermal preservation required?
☒	☐	☐	If "No", Project Chemist Approval Intials: ____
☒	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☒	☐	☐	Completed Sample Preservation Verification Form?
☒	☐	☐	Samples chemically preserved correctly?
☒	☐	☐	If "No", added orange tag?
	☒	☐	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☒	☐	Analysis Requested?
☒	☐	Sample ID matches COC?
☒	☐	Sample Date and Time matches COC?
☒		Container type completed on COC?
☒	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☒ NONE RECEIVED
- ☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☒	Broken containers/lids?
	☐	☒	Missing or incomplete labels?
	☐	☒	Illegible information on labels?
	☐	☒	Low volume received?
	☐	☒	Inappropriate or non-TriMatrix containers received?
☐	☐	☒	VOC vials / TOX containers have headspace?
☒	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/22/13 1245	8/22/13 1414	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist — revision: 3.4

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75294

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8837
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 1,4-Dioxane 8260 SIM	TCL SVOCs	TAL Metals	Dissolved Fe & Mn	CO_2, Alkalinity, Nitrate, Sulfate	Hexavalent Chromium	Methane
57728.01	8/20/13	1423	MW-04-01(3)(08202013)	GW	11	3	6	2					X	X	X	X	X		X
.02	8/20/13	1633	P3-SB-28(08202013)	GW	12	4	6	2					X	X	X	X	X	X	X
.03	8/20/13	—	TRIP BLANK(08202013)		1		1						X						

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE 8/20/13	TIME 1715
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8-21	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 8-21	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Fed Ex Storage	DATE 8-21	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 8-21-13	TIME 9:30
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Ball	DATE 8/21/13	TIME 9:30
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57736.01(01)
Generated on 09/09/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57736.01-S57736.03
Project: Plant 6/B0064481.2013.00603
Collected Date: 08/21/2013
Submitted Date/Time: 08/21/2013 13:45
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57736.01	MW-03-04 (82113)	Groundwater	08/21/2013 09:25
S57736.02	MW-02-01 (6) (82113)	Groundwater	08/21/2013 11:30
S57736.03	Trip Blank	Liquid	08/21/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57736.01
Sample Tag: MW-03-04 (82113)
Collected Date/Time: 08/21/2013 09:25
Matrix: Groundwater
COC Reference: 75450

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR
1	500ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	300	mg/L	1	2320B	08/23/13 10:22	JDP		
Carbon Dioxide	121	mg/L	10	4500-CO2C	08/22/13 09:20	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 11:54	JDP	14797-55-8	
Sulfate	81	mg/L	5	E300.0	08/22/13 11:54	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 16:05	PER	7440-36-0	
Arsenic	0.021	mg/L	0.002	SW6020	09/06/13 16:05	PER	7440-38-2	
Barium	0.342	mg/L	0.005	SW6020	09/06/13 16:05	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	09/06/13 16:05	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 16:05	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 16:05	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 16:05	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/06/13 16:05	PER	7440-50-8	
Iron, Dissolved	3.69	mg/L	0.02	E200.8	09/06/13 16:09	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 16:05	PER	7439-92-1	
Manganese, Dissolved	0.130	mg/L	0.005	E200.8	09/06/13 16:09	PER	7439-96-5	
Manganese	0.140	mg/L	0.005	SW6020	09/06/13 16:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:06	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020	09/06/13 16:05	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 16:05	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 16:05	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 16:05	PER	7440-62-2	
Zinc	0.007	mg/L	0.005	SW6020	09/06/13 16:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	92-52-4	

Lab Sample ID: S57736.01 (continued)
Sample Tag: MW-03-04 (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/29/13 00:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	08/29/13 00:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	91-20-3	

Lab Sample ID: S57736.01 (continued)
Sample Tag: MW-03-04 (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/29/13 00:16	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	47	ug/L	5	SW8260B - SIM	08/22/13 18:57	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 15:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 15:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 15:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 15:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 15:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	124-48-1	

Lab Sample ID: S57736.01 (continued)
Sample Tag: MW-03-04 (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 15:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 15:23	WAT	96-12-8	
Organics								
Methane in Water	41	ug/L	0.5	RSK-175	08/29/13 11:42	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57736.02
Sample Tag: MW-02-01 (6) (82113)
Collected Date/Time: 08/21/2013 11:30
Matrix: Groundwater
COC Reference: 75450

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR
1	500ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	402	mg/L	1	2320B	08/23/13 10:24	JDP		
Carbon Dioxide	206	mg/L	10	4500-CO2C	08/22/13 09:26	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 12:07	JDP	14797-55-8	
Sulfate	27	mg/L	5	E300.0	08/22/13 12:07	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 16:15	PER	7440-36-0	
Arsenic	0.014	mg/L	0.002	SW6020	09/06/13 16:15	PER	7440-38-2	
Barium	1.74	mg/L	0.005	SW6020	09/06/13 16:15	PER	7440-39-3	
Boron	0.15	mg/L	0.04	SW6020	09/06/13 16:15	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 16:15	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 16:15	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 16:15	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/06/13 16:15	PER	7440-50-8	
Iron, Dissolved	7.91	mg/L	0.02	E200.8	09/06/13 16:17	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 16:15	PER	7439-92-1	
Manganese, Dissolved	0.228	mg/L	0.005	E200.8	09/06/13 16:17	PER	7439-96-5	
Manganese	0.224	mg/L	0.005	SW6020	09/06/13 16:15	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:08	CCM	7439-97-6	
Nickel	0.034	mg/L	0.005	SW6020	09/06/13 16:15	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 16:15	PER	7782-49-2	
Silver	0.0006	mg/L	0.0005	SW6020	09/06/13 16:15	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 16:15	PER	7440-62-2	
Zinc	0.017	mg/L	0.005	SW6020	09/06/13 16:15	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	92-52-4	

Lab Sample ID: S57736.02 (continued)
Sample Tag: MW-02-01 (6) (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/30/13 20:56	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/30/13 20:56	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	08/30/13 20:56	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	91-20-3	

Lab Sample ID: S57736.02 (continued)
Sample Tag: MW-02-01 (6) (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/30/13 20:56	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/30/13 20:56	JGH	118-74-1	
Organics - Volatiles								
1,4-Dioxane	23	ug/L	5	SW8260B - SIM	08/22/13 19:15	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 15:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 15:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 15:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 15:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 15:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	124-48-1	

Lab Sample ID: S57736.02 (continued)
Sample Tag: MW-02-01 (6) (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 15:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 15:43	WAT	96-12-8	
Organics								
Methane in Water	25	ug/L	0.5	RSK-175	08/29/13 11:51	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57736.03
Sample Tag: Trip Blank
Collected Date/Time: 08/21/2013 07:00
Matrix: Liquid
COC Reference: 75450

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 19:33	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 16:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 16:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 16:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 16:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 16:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	79-34-5	

Lab Sample ID: S57736.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 16:04	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 16:04	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75450

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO: 810 229 8594 FAX NO: 810 229 8857 P.O. NO.:
E-MAIL ADDRESS: Lance.Rogers@Arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: PLANT 6 / B006481.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1,4-D, SDMS	TCL SVOC's	TAL METALS	DISS Fe MW	Sulfate, Nitrate	CO2 Alkalinity	methane	DISS Metals
57736.01	8/21	0925	MW-03-04 (82113)	GW	11	3	6	2					X	X	X	X	X	X	X	
.02	8/21	1130	MW-02-01 (82113)	GW	11	3	6	2					X	X	X	X	X	X	X	
.03	8/21	0700	TRIP BLANK	L	1		1						X							

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Steve Stelter	☒ Sampler	DATE 8/21/13	TIME 1255
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 8/21/13	TIME 1255
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE 8/21/13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Talanta Faust		DATE 8-21-13	TIME 1345

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE 8/21/13	TIME 1305
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 8/21/13	TIME 1305
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL 5°
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308433	08/22/2013	S57736

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308433**
Project:	Subcontract Lab Services	Description:	S57736
Client Sample ID:	**57736.01**	Sampled:	08/21/13 09:25
Lab Sample ID:	**1308433-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**41**	0.50	ug/L	1	RSK-175	08/29/13 11:42	JMF	1309108

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308433**
Project:	Subcontract Lab Services	Description:	S57736
Client Sample ID:	**57736.02**	Sampled:	08/21/13 11:30
Lab Sample ID:	**1308433-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**25**	0.50	ug/L	1	RSK-175	08/29/13 11:51	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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27-14

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

#1308433
75468

CHAIN OF CUSTODY RECORD

Rack # 116 White

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague SAME: X
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557736
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
-01	8/21	925	557736.01	GW	3		X						X	
-02	8/21	1130	557736.02	↓	↓		↓						X	* Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler	DATE: 8/21/13	TIME: 1600	
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5973 1033	DATE:	TIME:	
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	

RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION: Lyle Romeyn	DATE: 8/22/13	TIME: 1245	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

TRIMATRIX LABORATORIES

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Individual sample results relate only to the sample tested.

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit — Work Order #: 1308433
Receipt Record Page/Line #: — New / Add To: — Project Chemist: — Sample #s:

Recorded by (initials/date): LR 8/22/13 — ☑ Cooler ☐ Box ☐ Other ____ — Qty Received: 1 — Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) — ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Client (RUSH)	1355	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	4.9	−	4.9
2	4.9	−	4.9
3	5.1	−	5.1
Average °C			5.0

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑	☐	Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐	☐	If "No", Project Chemist Approval Initials: ____
☑	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐	☐	Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐	☐	If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/22/13 1245	8/22/13 1414	Yes / (No)

Log In Forms - Receiving Log-In_Checklist — revision: 3.4

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

Analytical Laboratory Report

Report ID: S57737.01(01)
Generated on 09/09/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57737.01-S57737.03
Project: B0064480.2013
Collected Date: 08/21/2013
Submitted Date/Time: 08/21/2013 13:45
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57737.01	MW-22 (08212013)	Groundwater	08/21/2013 09:37
S57737.02	UNK-09 (08212013)	Groundwater	08/21/2013 12:15
S57737.03	Trip Blank (08212013)	Liquid	08/21/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57737.01
Sample Tag: MW-22 (08212013)
Collected Date/Time: 08/21/2013 09:37
Matrix: Groundwater
COC Reference: 75454

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR
1	500ml Plastic	None	Yes	5.5	IR
1	125ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	216	mg/L	1	2320B	08/23/13 10:26	JDP		
Carbon Dioxide	140	mg/L	10	4500-CO2C	08/22/13 09:28	JDP		
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	08/21/13 16:24	MJC	18540-29-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 12:20	JDP	14797-55-8	
Sulfate	158	mg/L	5	E300.0	08/22/13 12:20	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 16:19	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/06/13 16:19	PER	7440-38-2	
Barium	0.106	mg/L	0.005	SW6020	09/06/13 16:19	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/06/13 16:19	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 16:19	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 16:19	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 16:19	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/06/13 16:19	PER	7440-50-8	
Iron, Dissolved	1.58	mg/L	0.02	E200.8	09/06/13 16:56	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 16:19	PER	7439-92-1	
Manganese, Dissolved	0.817	mg/L	0.005	E200.8	09/06/13 16:56	PER	7439-96-5	
Manganese	0.821	mg/L	0.005	SW6020	09/06/13 16:19	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:10	CCM	7439-97-6	
Nickel	0.022	mg/L	0.005	SW6020	09/06/13 16:19	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 16:19	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 16:19	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 16:19	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020	09/06/13 16:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	120-12-7	

Lab Sample ID: S57737.01 (continued)
Sample Tag: MW-22 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Atrazine	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/30/13 21:30	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/30/13 21:30	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/30/13 21:30	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	621-64-7	

Lab Sample ID: S57737.01 (continued)
Sample Tag: MW-22 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/30/13 21:30	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/30/13 21:30	JGH	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 19:51	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 16:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 16:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 16:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 16:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 16:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	79-00-5	

Lab Sample ID: S57737.01 (continued)
Sample Tag: MW-22 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 16:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 16:24	WAT	96-12-8	
Organics								
Methane in Water	2.4	ug/L	0.5	RSK-175	08/29/13 11:55	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57737.02
Sample Tag: UNK-09 (08212013)
Collected Date/Time: 08/21/2013 12:15
Matrix: Groundwater
COC Reference: 75454

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
1	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 16:58	PER	7440-36-0	
Arsenic	0.024	mg/L	0.002	SW6020	09/06/13 16:58	PER	7440-38-2	
Barium	0.053	mg/L	0.005	SW6020	09/06/13 16:58	PER	7440-39-3	
Boron	0.10	mg/L	0.04	SW6020	09/06/13 16:58	PER	7440-42-8	
Cadmium	0.0007	mg/L	0.0005	SW6020	09/06/13 16:58	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 16:58	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 16:58	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/06/13 16:58	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 16:58	PER	7439-92-1	
Manganese	0.045	mg/L	0.005	SW6020	09/06/13 16:58	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:12	CCM	7439-97-6	
Nickel	0.005	mg/L	0.005	SW6020	09/06/13 16:58	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 16:58	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 16:58	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 16:58	PER	7440-62-2	
Zinc	0.026	mg/L	0.005	SW6020	09/06/13 16:58	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	08/30/13 22:04	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	91-58-7	

Lab Sample ID: S57737.02 (continued)
Sample Tag: UNK-09 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/30/13 22:04	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/30/13 22:04	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	08/30/13 22:04	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	86-30-6	
Naphthalene	1	ug/L	1	SW8270C	08/30/13 22:04	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/30/13 22:04	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/30/13 22:04	JGH	118-74-1	

Lab Sample ID: S57737.02 (continued)
Sample Tag: UNK-09 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 20:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 16:45	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 16:45	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 16:45	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 16:45	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 16:45	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 16:45	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	120-82-1	

Lab Sample ID: S57737.02 (continued)
Sample Tag: UNK-09 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 16:45	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57737.03
Sample Tag: Trip Blank (08212013)
Collected Date/Time: 08/21/2013 00:01
Matrix: Liquid
COC Reference: 75454

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 20:27	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/26/13 17:05	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 17:05	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 17:05	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 17:05	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 17:05	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	79-34-5	

Lab Sample ID: S57737.03 (continued)
Sample Tag: Trip Blank (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 17:05	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 17:05	WAT	96-12-8	

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C.O.C. PAGE # _____ OF _____

75454

CHAIN OF CUSTODY RECORD

REPORT TO

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ADDRESS: 10559 Citation Dr
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8857 P.O. NO.:
E-MAIL ADDRESS: Lance.Rogers@Arcadis-US.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 30064400.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Mike Kohlhagen

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TIC VOCs 1,4-Dioxane 8260 SIM	TIC SVOC's	TAL Metals	Dissolved Fe & Mn	Hexavalent Chromium	Methane, Ethane, Ethene	Alkalinity, Sulfate, Nitrate			
57737.01	8/21/13	0937	MW-22(08212013)	GW	12	4	6	2					X	X	X	X	X	X	X			
.02	8/21/13	1215	UNK-09(08212013)	GW	6	2	3	1					X	X	X							
.03	8/21/13	—	TRIP BLANK(08212013)	—	1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE	TIME
		8/21/13	1305
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Merit		8-21-13	1305
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	8.21.13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Tabitha Frost	8-21-13	1345

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 3.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308434	08/22/2013	S57737

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308434**
Project:	Subcontract Lab Services	Description:	S57737
Client Sample ID:	**57737.01**	Sampled:	08/21/13 09:37
Lab Sample ID:	**1308434-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**2.4**	0.50	ug/L	1	RSK-175	08/29/13 11:55	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50
Matrix Spike 1308434-01 57737.01					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane	2.45	33.0	**31.7**	89	42-112	--		0.50
Matrix Spike Duplicate 1308434-01 57737.01					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane	2.45	33.0	**31.1**	87	42-112	2	20	0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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27-15

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308434

75469

CHAIN OF CUSTODY RECORD

734 White

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557737
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane
-01	8/21	937	557737.01	GW	3		X						X

*Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/21/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5973 1033 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8/22/13 TIME: 1245

SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL _____

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TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit — Work Order #: 1308434

Receipt Record Page/Line #: — New / Add To — Project Chemist — Sample #s

Recorded by (initials/date): LR 8/22/13

☑ Cooler ☐ Box ☐ Other_____ — Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) — ☐ See Additional Cooler Information Form

Cooler # 1 (Client) (RUSH) — Time: 1355

Custody Seals:
- ☑ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☑ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

TB location: Representative / Not Representative	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
1	4.9	–	4.9
2	4.9	–	4.9
3	5.1	–	5.1
Average °C			5.0

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

TB location: Representative / Not Representative	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

TB location: Representative / Not Representative	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

TB location: Representative / Not Representative	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other Merit

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☑ NONE RECEIVED
- ☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/22/13 1245	8/22/13 1414	Yes / (No)

Log In Forms - Receiving Log-In_Checklist — revision: 3.4

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Individual sample results relate only to the sample tested.
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Analytical Laboratory Report

Report ID: S57735.01(01)
Generated on 09/09/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57735.01-S57735.05
Project: PLANT 2 B0064479
Collected Date: 08/21/2013
Submitted Date/Time: 08/21/2013 13:05
Sampled by: Cliff Walls
P.O. #: B0064479

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57735.01	P2-MW-02	Groundwater	08/21/2013 09:45
S57735.02	P2-MW-02 MS	Groundwater	08/21/2013 09:45
S57735.03	P2-MW-02 MSD	Groundwater	08/21/2013 09:45
S57735.04	Trip Blank	Groundwater	08/21/2013 07:00
S57735.05	P2-SB-20	Groundwater	08/21/2013 12:40

Analytical Laboratory Report

Lab Sample ID: S57735.01
Sample Tag: P2-MW-02
Collected Date/Time: 08/21/2013 09:45
Matrix: Groundwater
COC Reference: 75455

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/23/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:45	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:31	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 16:29	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/06/13 16:31	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/06/13 16:29	PER	7440-38-2	
Barium, Dissolved	0.197	mg/L	0.005	SW6020	09/06/13 16:31	PER	7440-39-3	
Barium	0.197	mg/L	0.005	SW6020	09/06/13 16:29	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	09/06/13 16:31	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020	09/06/13 16:29	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/06/13 16:31	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 16:29	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:31	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 16:29	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:31	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 16:29	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:31	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/06/13 16:29	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/06/13 16:31	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 16:29	PER	7439-92-1	
Manganese, Dissolved	0.216	mg/L	0.005	SW6020	09/06/13 16:31	PER	7439-96-5	
Manganese	0.212	mg/L	0.005	SW6020	09/06/13 16:29	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/23/13 16:45	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 16:17	CCM	7439-97-6	
Nickel, Dissolved	0.012	mg/L	0.005	SW6020	09/06/13 16:31	PER	7440-02-0	
Nickel	0.012	mg/L	0.005	SW6020	09/06/13 16:29	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:31	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 16:29	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/06/13 16:31	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 16:29	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:31	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 16:29	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:31	PER	7440-66-6	
Zinc	0.005	mg/L	0.005	SW6020	09/06/13 16:29	PER	7440-66-6	

Lab Sample ID: S57735.01 (continued)
Sample Tag: P2-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/30/13 17:30	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/30/13 17:30	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	88-75-5	

Lab Sample ID: S57735.01 (continued)
Sample Tag: P2-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/30/13 17:30	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/30/13 17:30	JGH	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 14:14	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 14:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 14:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 14:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 14:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 14:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	108-87-2	

Lab Sample ID: S57735.01 (continued)
Sample Tag: P2-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 14:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 14:43	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57735.02
Sample Tag: P2-MW-02 MS
Collected Date/Time: 08/21/2013 09:45
Matrix: Groundwater
COC Reference: 75455

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/23/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:45	WAT		
Metals								
Antimony, Dissolved	0.260	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-36-0	
Antimony	0.264	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-36-0	
Arsenic, Dissolved	0.260	mg/L	0.00002	SW6020	09/06/13 16:40	PER	7440-38-2	
Arsenic	0.257	mg/L	0.00002	SW6020	09/06/13 16:35	PER	7440-38-2	
Barium, Dissolved	0.463	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-39-3	
Barium	0.470	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-39-3	
Boron, Dissolved	0.305	mg/L	0.00004	SW6020	09/06/13 16:40	PER	7440-42-8	
Boron	0.291	mg/L	0.00004	SW6020	09/06/13 16:35	PER	7440-42-8	
Cadmium, Dissolved	0.259	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-43-9	
Cadmium	0.258	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-43-9	
Chromium, Dissolved	0.245	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-47-3	
Chromium	0.254	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-47-3	
Cobalt, Dissolved	0.243	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-48-4	
Cobalt	0.251	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-48-4	
Copper, Dissolved	0.252	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-50-8	
Copper	0.235	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-50-8	
Lead, Dissolved	0.236	mg/L	0.00003	SW6020	09/06/13 16:40	PER	7439-92-1	
Lead	0.235	mg/L	0.00003	SW6020	09/06/13 16:35	PER	7439-92-1	
Manganese, Dissolved	0.461	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7439-96-5	
Manganese	0.464	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7439-96-5	
Mercury, Dissolved	0.0020	mg/L	0.0001	SW7471A	08/23/13 16:47	CCM	7439-97-6	
Mercury	0.0020	mg/L	0.0001	SW7471A	08/23/13 16:19	CCM	7439-97-6	
Nickel, Dissolved	0.246	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-02-0	
Nickel	0.255	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-02-0	
Selenium, Dissolved	0.246	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7782-49-2	
Selenium	0.244	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7782-49-2	
Silver, Dissolved	0.246	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-22-4	
Silver	0.245	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-22-4	
Vanadium, Dissolved	0.247	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-62-2	
Vanadium	0.254	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-62-2	
Zinc, Dissolved	0.245	mg/L	0.00005	SW6020	09/06/13 16:40	PER	7440-66-6	
Zinc	0.252	mg/L	0.00005	SW6020	09/06/13 16:35	PER	7440-66-6	

Lab Sample ID: S57735.02 (continued)
Sample Tag: P2-MW-02 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	48	ug/L	1	SW8270C	08/30/13 18:04	JGH	83-32-9	1
Acenaphthylene	53	ug/L	1	SW8270C	08/30/13 18:04	JGH	208-96-8	1
Acetophenone	39	ug/L	1	SW8270C	08/30/13 18:04	JGH	98-86-2	1
Anthracene	53	ug/L	1	SW8270C	08/30/13 18:04	JGH	120-12-7	1
Atrazine	53	ug/L	1	SW8270C	08/30/13 18:04	JGH	1912-24-9	1
1,1'-Biphenyl	45	ug/L	1	SW8270C	08/30/13 18:04	JGH	92-52-4	1
4-Bromophenyl phenyl ether	51	ug/L	1	SW8270C	08/30/13 18:04	JGH	101-55-3	1
di-n-Butyl phthalate	57	ug/L	1	SW8270C	08/30/13 18:04	JGH	84-74-2	1
Benzaldehyde	34	ug/L	1	SW8270C	08/30/13 18:04	JGH	100-52-7	1
Benzo(a)anthracene	54	ug/L	1	SW8270C	08/30/13 18:04	JGH	56-55-3	1
Benzo(a)pyrene	55	ug/L	1	SW8270C	08/30/13 18:04	JGH	50-32-8	1
Benzo(b)fluoranthene	52	ug/L	1	SW8270C	08/30/13 18:04	JGH	205-99-2	1
Benzo(ghi)perylene	86	ug/L	1	SW8270C	08/30/13 18:04	JGH	191-24-2	1
Benzo(k)fluoranthene	45	ug/L	1	SW8270C	08/30/13 18:04	JGH	207-08-9	1
Butyl benzyl phthalate	55	ug/L	1	SW8270C	08/30/13 18:04	JGH	85-68-7	1
2-Chloronaphthalene	42	ug/L	1	SW8270C	08/30/13 18:04	JGH	91-58-7	1
2-Chlorophenol	39	ug/L	1	SW8270C	08/30/13 18:04	JGH	95-57-8	1
4-Chloro-3-methylphenol	51	ug/L	1	SW8270C	08/30/13 18:04	JGH	59-50-7	1
4-Chloroaniline	16	ug/L	1	SW8270C	08/30/13 18:04	JGH	106-47-8	1
4-Chlorophenyl phenyl ether	50	ug/L	1	SW8270C	08/30/13 18:04	JGH	7005-72-3	1
Caprolactam	7	ug/L	1	SW8270C	08/30/13 18:04	JGH	105-60-2	1
Carbazole	52	ug/L	1	SW8270C	08/30/13 18:04	JGH	86-74-8	1
bis(2-Chloroethoxy)methane	41	ug/L	1	SW8270C	08/30/13 18:04	JGH	111-91-1	1
bis(2-Chloroethyl)ether	36	ug/L	1	SW8270C	08/30/13 18:04	JGH	111-44-4	1
bis(2-Chloroisopropyl)ether	38	ug/L	1	SW8270C	08/30/13 18:04	JGH	108-60-1	1
Chrysene	56	ug/L	1	SW8270C	08/30/13 18:04	JGH	218-01-9	1
2,4-Dichlorophenol	46	ug/L	1	SW8270C	08/30/13 18:04	JGH	120-83-2	1
2,4-Dimethylphenol	48	ug/L	1	SW8270C	08/30/13 18:04	JGH	105-67-9	1
2,4-Dinitrophenol	44	ug/L	1	SW8270C	08/30/13 18:04	JGH	51-28-5	1
2,4-Dinitrotoluene	53	ug/L	1	SW8270C	08/30/13 18:04	JGH	121-14-2	1
2,6-Dinitrotoluene	53	ug/L	1	SW8270C	08/30/13 18:04	JGH	606-20-2	1
4,6-Dinitro-2-methylphenol	55	ug/L	1	SW8270C	08/30/13 18:04	JGH	534-52-1	1
Dibenzo(ah)anthracene	86	ug/L	2	SW8270C	08/30/13 18:04	JGH	53-70-3	1
Dibenzofuran	49	ug/L	1	SW8270C	08/30/13 18:04	JGH	132-64-9	1
Diethyl phthalate	54	ug/L	1	SW8270C	08/30/13 18:04	JGH	84-66-2	1
Dimethyl phthalate	56	ug/L	1	SW8270C	08/30/13 18:04	JGH	131-11-3	1
bis(2-Ethylhexyl)phthalate	60	ug/L	1	SW8270C	08/30/13 18:04	JGH	117-81-7	1
Fluoranthene	55	ug/L	1	SW8270C	08/30/13 18:04	JGH	206-44-0	1
Fluorene	51	ug/L	1	SW8270C	08/30/13 18:04	JGH	86-73-7	1
Hexachlorobutadiene	33	ug/L	1	SW8270C	08/30/13 18:04	JGH	87-68-3	1
Hexachlorocyclopentadiene	49	ug/L	1	SW8270C	08/30/13 18:04	JGH	77-47-4	1
Hexachloroethane	28	ug/L	1	SW8270C	08/30/13 18:04	JGH	67-72-1	1
Indeno(1,2,3-cd)pyrene	84	ug/L	1	SW8270C	08/30/13 18:04	JGH	193-39-5	1
Isophorone	57	ug/L	1	SW8270C	08/30/13 18:04	JGH	78-59-1	1
2-Methylnaphthalene	44	ug/L	1	SW8270C	08/30/13 18:04	JGH	91-57-6	1
2-Methylphenol	43	ug/L	1	SW8270C	08/30/13 18:04	JGH	95-48-7	1
3-, 4-Methylphenol	46	ug/L	1	SW8270C	08/30/13 18:04	JGH	3/4-Cresol	1
2-Nitroaniline	53	ug/L	1	SW8270C	08/30/13 18:04	JGH	88-74-4	1

1-Spiked at 54ug/L

Lab Sample ID: S57735.02 (continued)
Sample Tag: P2-MW-02 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	42	ug/L	1	SW8270C	08/30/13 18:04	JGH	88-75-5	1
3-Nitroaniline	44	ug/L	1	SW8270C	08/30/13 18:04	JGH	99-09-2	1
4-Nitroaniline	49	ug/L	1	SW8270C	08/30/13 18:04	JGH	100-01-6	1
4-Nitrophenol	47	ug/L	1	SW8270C	08/30/13 18:04	JGH	100-02-7	1
N-Nitrosodi-n-propylamine	42	ug/L	1	SW8270C	08/30/13 18:04	JGH	621-64-7	1
N-Nitrosodiphenylamine	51	ug/L	1	SW8270C	08/30/13 18:04	JGH	86-30-6	1
Naphthalene	39	ug/L	1	SW8270C	08/30/13 18:04	JGH	91-20-3	1
Nitrobenzene	38	ug/L	1	SW8270C	08/30/13 18:04	JGH	98-95-3	1
di-n-Octyl phthalate	56	ug/L	1	SW8270C	08/30/13 18:04	JGH	117-84-0	1
Pentachlorophenol	52	ug/L	2	SW8270C	08/30/13 18:04	JGH	87-86-5	1
Phenanthrene	52	ug/L	1	SW8270C	08/30/13 18:04	JGH	85-01-8	1
Phenol	25	ug/L	1	SW8270C	08/30/13 18:04	JGH	108-95-2	1
Pyrene	53	ug/L	1	SW8270C	08/30/13 18:04	JGH	129-00-0	1
2,4,5-Trichlorophenol	59	ug/L	1	SW8270C	08/30/13 18:04	JGH	95-95-4	1
2,4,6-Trichlorophenol	48	ug/L	1	SW8270C	08/30/13 18:04	JGH	88-06-2	1
Hexachlorobenzene	50	ug/L	1	SW8270C	08/30/13 18:04	JGH	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	58	ug/L	5	SW8260B - SIM	08/23/13 13:01	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	52	ug/L	1	SW8260B	08/23/13 12:38	WAT	76-13-1	2
Acetone	39	ug/L	10	SW8260B	08/23/13 12:38	WAT	67-64-1	2
Carbon disulfide	55	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-15-0	2
Methyl Acetate	48	ug/L	10	SW8260B	08/23/13 12:38	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	1634-04-4	2
2-Butanone (MEK)	44	ug/L	10	SW8260B	08/23/13 12:38	WAT	78-93-3	2
Dichlorodifluoromethane	45	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-71-8	2
Chloromethane	45	ug/L	1	SW8260B	08/23/13 12:38	WAT	74-87-3	2
Vinyl chloride	47	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-01-4	2
Bromomethane	60	ug/L	1	SW8260B	08/23/13 12:38	WAT	74-83-9	2
Chloroethane	58	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-00-3	2
Trichlorofluoromethane	59	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-69-4	2
1,1-Dichloroethene	51	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-35-4	2
Methylene chloride	50	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-09-2	2
trans-1,2-Dichloroethene	51	ug/L	1	SW8260B	08/23/13 12:38	WAT	156-60-5	2
1,1-Dichloroethane	52	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-34-3	2
cis-1,2-Dichloroethene	53	ug/L	1	SW8260B	08/23/13 12:38	WAT	156-59-2	2
Chloroform	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	67-66-3	2
1,1,1-Trichloroethane	58	ug/L	1	SW8260B	08/23/13 12:38	WAT	71-55-6	2
Cyclohexane	47	ug/L	1	SW8260B	08/23/13 12:38	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	51	ug/L	10	SW8260B	08/23/13 12:38	WAT	108-10-1	2
2-Hexanone	50	ug/L	10	SW8260B	08/23/13 12:38	WAT	591-78-6	2
Carbon tetrachloride	61	ug/L	1	SW8260B	08/23/13 12:38	WAT	56-23-5	2
Benzene	52	ug/L	1	SW8260B	08/23/13 12:38	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260B	08/23/13 12:38	WAT	107-06-2	2
Trichloroethene	53	ug/L	1	SW8260B	08/23/13 12:38	WAT	79-01-6	2

1-Spiked at 54ug/L
2-Spiked at 50ug/l

Lab Sample ID: S57735.02 (continued)
Sample Tag: P2-MW-02 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dichloropropane	52	ug/L	1	SW8260B	08/23/13 12:38	WAT	78-87-5	1
Bromodichloromethane	61	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-27-4	1
Methyl cyclohexane	53	ug/L	1	SW8260B	08/23/13 12:38	WAT	108-87-2	1
cis-1,3-Dichloropropene	56	ug/L	1	SW8260B	08/23/13 12:38	WAT	10061-01-5	1
Toluene	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	108-88-3	1
trans-1,3-Dichloropropene	56	ug/L	1	SW8260B	08/23/13 12:38	WAT	10061-02-6	1
1,1,2-Trichloroethane	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	79-00-5	1
Tetrachloroethene	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	127-18-4	1
Dibromochloromethane	55	ug/L	1	SW8260B	08/23/13 12:38	WAT	124-48-1	1
Chlorobenzene	53	ug/L	1	SW8260B	08/23/13 12:38	WAT	108-90-7	1
1,1,2,2-Tetrachloroethane	52	ug/L	1	SW8260B	08/23/13 12:38	WAT	79-34-5	1
Ethylbenzene	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	100-41-4	1
p,m-Xylene	105	ug/L	2	SW8260B	08/23/13 12:38	WAT		1
o-Xylene	55	ug/L	1	SW8260B	08/23/13 12:38	WAT	95-47-6	1
Styrene	52	ug/L	1	SW8260B	08/23/13 12:38	WAT	100-42-5	1
Isopropylbenzene	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	98-82-8	1
Bromoform	53	ug/L	1	SW8260B	08/23/13 12:38	WAT	75-25-2	1
1,3-Dichlorobenzene	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	541-73-1	1
1,4-Dichlorobenzene	54	ug/L	1	SW8260B	08/23/13 12:38	WAT	106-46-7	1
1,2-Dichlorobenzene	53	ug/L	1	SW8260B	08/23/13 12:38	WAT	95-50-1	1
1,2,4-Trichlorobenzene	52	ug/L	1	SW8260B	08/23/13 12:38	WAT	120-82-1	1
1,2-Dibromoethane	55	ug/L	1	SW8260B	08/23/13 12:38	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	46	ug/L	1	SW8260B	08/23/13 12:38	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57735.03
Sample Tag: P2-MW-02 MSD
Collected Date/Time: 08/21/2013 09:45
Matrix: Groundwater
COC Reference: 75455

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/23/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:45	WAT		
Metals								
Antimony, Dissolved	0.261	mg/L	0.005	SW6020	09/06/13 16:42	PER	7440-36-0	
Antimony	0.258	mg/L	0.005	SW6020	09/06/13 16:37	PER	7440-36-0	
Arsenic, Dissolved	0.255	mg/L	0.002	SW6020	09/06/13 16:42	PER	7440-38-2	
Arsenic	0.251	mg/L	0.002	SW6020	09/06/13 16:37	PER	7440-38-2	
Barium, Dissolved	0.473	mg/L	0.005	SW6020	09/06/13 16:42	PER	7440-39-3	
Barium	0.465	mg/L	0.005	SW6020	09/06/13 16:37	PER	7440-39-3	
Boron, Dissolved	0.31	mg/L	0.04	SW6020	09/06/13 16:42	PER	7440-42-8	
Boron	0.30	mg/L	0.04	SW6020	09/06/13 16:37	PER	7440-42-8	
Cadmium, Dissolved	0.260	mg/L	0.0005	SW6020	09/06/13 16:42	PER	7440-43-9	
Cadmium	0.259	mg/L	0.0005	SW6020	09/06/13 16:37	PER	7440-43-9	
Chromium, Dissolved	0.249	mg/L	0.005	SW6020	09/06/13 16:42	PER	7440-47-3	
Chromium	0.256	mg/L	0.005	SW6020	09/06/13 16:37	PER	7440-47-3	
Cobalt, Dissolved	0.249	mg/L	0.005	SW6020	09/06/13 16:42	PER	7440-48-4	
Cobalt	0.252	mg/L	0.005	SW6020	09/06/13 16:37	PER	7440-48-4	
Copper, Dissolved	0.232	mg/L	0.005	SW6020	09/06/13 16:42	PER	7440-50-8	
Copper	0.236	mg/L	0.005	SW6020	09/06/13 16:37	PER	7440-50-8	
Lead, Dissolved	0.235	mg/L	0.003	SW6020	09/06/13 16:42	PER	7439-92-1	
Lead	0.236	mg/L	0.003	SW6020	09/06/13 16:37	PER	7439-92-1	
Manganese, Dissolved	0.458	mg/L	0.005	SW6020	09/06/13 16:42	PER	7439-96-5	
Manganese	0.471	mg/L	0.005	SW6020	09/06/13 16:37	PER	7439-96-5	
Mercury, Dissolved	0.0020	mg/L	0.0001	SW7471A	08/23/13 16:49	CCM	7439-97-6	
Mercury	0.0020	mg/L	0.0001	SW7471A	08/23/13 16:21	CCM	7439-97-6	
Nickel, Dissolved	0.253	mg/L	0.005	SW6020	09/06/13 16:42	PER	7440-02-0	
Nickel	0.255	mg/L	0.005	SW6020	09/06/13 16:37	PER	7440-02-0	
Selenium, Dissolved	0.252	mg/L	0.005	SW6020	09/06/13 16:42	PER	7782-49-2	
Selenium	0.244	mg/L	0.005	SW6020	09/06/13 16:37	PER	7782-49-2	
Silver, Dissolved	0.246	mg/L	0.0005	SW6020	09/06/13 16:42	PER	7440-22-4	
Silver	0.250	mg/L	0.0005	SW6020	09/06/13 16:37	PER	7440-22-4	
Vanadium, Dissolved	0.254	mg/L	0.005	SW6020	09/06/13 16:42	PER	7440-62-2	
Vanadium	0.261	mg/L	0.005	SW6020	09/06/13 16:37	PER	7440-62-2	
Zinc, Dissolved	0.249	mg/L	0.005	SW6020	09/06/13 16:42	PER	7440-66-6	
Zinc	0.250	mg/L	0.005	SW6020	09/06/13 16:37	PER	7440-66-6	

Lab Sample ID: S57735.03 (continued)
Sample Tag: P2-MW-02 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	46	ug/L	1	SW8270C	08/30/13 18:38	JGH	83-32-9	1
Acenaphthylene	50	ug/L	1	SW8270C	08/30/13 18:38	JGH	208-96-8	1
Acetophenone	37	ug/L	1	SW8270C	08/30/13 18:38	JGH	98-86-2	1
Anthracene	50	ug/L	1	SW8270C	08/30/13 18:38	JGH	120-12-7	1
Atrazine	48	ug/L	1	SW8270C	08/30/13 18:38	JGH	1912-24-9	1
1,1'-Biphenyl	43	ug/L	1	SW8270C	08/30/13 18:38	JGH	92-52-4	1
4-Bromophenyl phenyl ether	46	ug/L	1	SW8270C	08/30/13 18:38	JGH	101-55-3	1
di-n-Butyl phthalate	53	ug/L	1	SW8270C	08/30/13 18:38	JGH	84-74-2	1
Benzaldehyde	33	ug/L	1	SW8270C	08/30/13 18:38	JGH	100-52-7	1
Benzo(a)anthracene	50	ug/L	1	SW8270C	08/30/13 18:38	JGH	56-55-3	1
Benzo(a)pyrene	50	ug/L	1	SW8270C	08/30/13 18:38	JGH	50-32-8	1
Benzo(b)fluoranthene	45	ug/L	1	SW8270C	08/30/13 18:38	JGH	205-99-2	1
Benzo(ghi)perylene	75	ug/L	1	SW8270C	08/30/13 18:38	JGH	191-24-2	1
Benzo(k)fluoranthene	44	ug/L	1	SW8270C	08/30/13 18:38	JGH	207-08-9	1
Butyl benzyl phthalate	50	ug/L	1	SW8270C	08/30/13 18:38	JGH	85-68-7	1
2-Chloronaphthalene	40	ug/L	1	SW8270C	08/30/13 18:38	JGH	91-58-7	1
2-Chlorophenol	38	ug/L	1	SW8270C	08/30/13 18:38	JGH	95-57-8	1
4-Chloro-3-methylphenol	48	ug/L	1	SW8270C	08/30/13 18:38	JGH	59-50-7	1
4-Chloroaniline	13	ug/L	1	SW8270C	08/30/13 18:38	JGH	106-47-8	1
4-Chlorophenyl phenyl ether	49	ug/L	1	SW8270C	08/30/13 18:38	JGH	7005-72-3	1
Caprolactam	7	ug/L	1	SW8270C	08/30/13 18:38	JGH	105-60-2	1
Carbazole	48	ug/L	1	SW8270C	08/30/13 18:38	JGH	86-74-8	1
bis(2-Chloroethoxy)methane	40	ug/L	1	SW8270C	08/30/13 18:38	JGH	111-91-1	1
bis(2-Chloroethyl)ether	35	ug/L	1	SW8270C	08/30/13 18:38	JGH	111-44-4	1
bis(2-Chloroisopropyl)ether	37	ug/L	1	SW8270C	08/30/13 18:38	JGH	108-60-1	1
Chrysene	51	ug/L	1	SW8270C	08/30/13 18:38	JGH	218-01-9	1
2,4-Dichlorophenol	44	ug/L	1	SW8270C	08/30/13 18:38	JGH	120-83-2	1
2,4-Dimethylphenol	45	ug/L	1	SW8270C	08/30/13 18:38	JGH	105-67-9	1
2,4-Dinitrophenol	40	ug/L	1	SW8270C	08/30/13 18:38	JGH	51-28-5	1
2,4-Dinitrotoluene	52	ug/L	1	SW8270C	08/30/13 18:38	JGH	121-14-2	1
2,6-Dinitrotoluene	49	ug/L	1	SW8270C	08/30/13 18:38	JGH	606-20-2	1
4,6-Dinitro-2-methylphenol	50	ug/L	1	SW8270C	08/30/13 18:38	JGH	534-52-1	1
Dibenzo(ah)anthracene	78	ug/L	2	SW8270C	08/30/13 18:38	JGH	53-70-3	1
Dibenzofuran	51	ug/L	1	SW8270C	08/30/13 18:38	JGH	132-64-9	1
Diethyl phthalate	53	ug/L	1	SW8270C	08/30/13 18:38	JGH	84-66-2	1
Dimethyl phthalate	53	ug/L	1	SW8270C	08/30/13 18:38	JGH	131-11-3	1
bis(2-Ethylhexyl)phthalate	55	ug/L	1	SW8270C	08/30/13 18:38	JGH	117-81-7	1
Fluoranthene	46	ug/L	1	SW8270C	08/30/13 18:38	JGH	206-44-0	1
Fluorene	52	ug/L	1	SW8270C	08/30/13 18:38	JGH	86-73-7	1
Hexachlorobutadiene	32	ug/L	1	SW8270C	08/30/13 18:38	JGH	87-68-3	1
Hexachlorocyclopentadiene	47	ug/L	1	SW8270C	08/30/13 18:38	JGH	77-47-4	1
Hexachloroethane	28	ug/L	1	SW8270C	08/30/13 18:38	JGH	67-72-1	1
Indeno(1,2,3-cd)pyrene	75	ug/L	1	SW8270C	08/30/13 18:38	JGH	193-39-5	1
Isophorone	54	ug/L	1	SW8270C	08/30/13 18:38	JGH	78-59-1	1
2-Methylnaphthalene	42	ug/L	1	SW8270C	08/30/13 18:38	JGH	91-57-6	1
2-Methylphenol	43	ug/L	1	SW8270C	08/30/13 18:38	JGH	95-48-7	1
3-, 4-Methylphenol	46	ug/L	1	SW8270C	08/30/13 18:38	JGH	3/4-Cresol	1
2-Nitroaniline	49	ug/L	1	SW8270C	08/30/13 18:38	JGH	88-74-4	1

1-Spiked at 53ug/L

Lab Sample ID: S57735.03 (continued)
Sample Tag: P2-MW-02 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	40	ug/L	1	SW8270C	08/30/13 18:38	JGH	88-75-5	1
3-Nitroaniline	39	ug/L	1	SW8270C	08/30/13 18:38	JGH	99-09-2	1
4-Nitroaniline	49	ug/L	1	SW8270C	08/30/13 18:38	JGH	100-01-6	1
4-Nitrophenol	52	ug/L	1	SW8270C	08/30/13 18:38	JGH	100-02-7	1
N-Nitrosodi-n-propylamine	40	ug/L	1	SW8270C	08/30/13 18:38	JGH	621-64-7	1
N-Nitrosodiphenylamine	47	ug/L	1	SW8270C	08/30/13 18:38	JGH	86-30-6	1
Naphthalene	37	ug/L	1	SW8270C	08/30/13 18:38	JGH	91-20-3	1
Nitrobenzene	37	ug/L	1	SW8270C	08/30/13 18:38	JGH	98-95-3	1
di-n-Octyl phthalate	51	ug/L	1	SW8270C	08/30/13 18:38	JGH	117-84-0	1
Pentachlorophenol	45	ug/L	2	SW8270C	08/30/13 18:38	JGH	87-86-5	1
Phenanthrene	48	ug/L	1	SW8270C	08/30/13 18:38	JGH	85-01-8	1
Phenol	27	ug/L	1	SW8270C	08/30/13 18:38	JGH	108-95-2	1
Pyrene	48	ug/L	1	SW8270C	08/30/13 18:38	JGH	129-00-0	1
2,4,5-Trichlorophenol	55	ug/L	1	SW8270C	08/30/13 18:38	JGH	95-95-4	1
2,4,6-Trichlorophenol	45	ug/L	1	SW8270C	08/30/13 18:38	JGH	88-06-2	1
Hexachlorobenzene	44	ug/L	1	SW8270C	08/30/13 18:38	JGH	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	52	ug/L	5	SW8260B - SIM	08/23/13 13:19	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	76-13-1	2
Acetone	38	ug/L	10	SW8260B	08/23/13 12:59	WAT	67-64-1	2
Carbon disulfide	55	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-15-0	2
Methyl Acetate	47	ug/L	10	SW8260B	08/23/13 12:59	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	55	ug/L	1	SW8260B	08/23/13 12:59	WAT	1634-04-4	2
2-Butanone (MEK)	44	ug/L	10	SW8260B	08/23/13 12:59	WAT	78-93-3	2
Dichlorodifluoromethane	46	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-71-8	2
Chloromethane	47	ug/L	1	SW8260B	08/23/13 12:59	WAT	74-87-3	2
Vinyl chloride	47	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-01-4	2
Bromomethane	61	ug/L	1	SW8260B	08/23/13 12:59	WAT	74-83-9	2
Chloroethane	62	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-00-3	2
Trichlorofluoromethane	60	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-69-4	2
1,1-Dichloroethene	52	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-35-4	2
Methylene chloride	50	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-09-2	2
trans-1,2-Dichloroethene	52	ug/L	1	SW8260B	08/23/13 12:59	WAT	156-60-5	2
1,1-Dichloroethane	52	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-34-3	2
cis-1,2-Dichloroethene	53	ug/L	1	SW8260B	08/23/13 12:59	WAT	156-59-2	2
Chloroform	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	67-66-3	2
1,1,1-Trichloroethane	59	ug/L	1	SW8260B	08/23/13 12:59	WAT	71-55-6	2
Cyclohexane	48	ug/L	1	SW8260B	08/23/13 12:59	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	51	ug/L	10	SW8260B	08/23/13 12:59	WAT	108-10-1	2
2-Hexanone	50	ug/L	10	SW8260B	08/23/13 12:59	WAT	591-78-6	2
Carbon tetrachloride	62	ug/L	1	SW8260B	08/23/13 12:59	WAT	56-23-5	2
Benzene	52	ug/L	1	SW8260B	08/23/13 12:59	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260B	08/23/13 12:59	WAT	107-06-2	2
Trichloroethene	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	79-01-6	2

1-Spiked at 53ug/L
2-Spiked at 50ug/l

Lab Sample ID: S57735.03 (continued)
Sample Tag: P2-MW-02 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dichloropropane	53	ug/L	1	SW8260B	08/23/13 12:59	WAT	78-87-5	1
Bromodichloromethane	61	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-27-4	1
Methyl cyclohexane	53	ug/L	1	SW8260B	08/23/13 12:59	WAT	108-87-2	1
cis-1,3-Dichloropropene	56	ug/L	1	SW8260B	08/23/13 12:59	WAT	10061-01-5	1
Toluene	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	108-88-3	1
trans-1,3-Dichloropropene	57	ug/L	1	SW8260B	08/23/13 12:59	WAT	10061-02-6	1
1,1,2-Trichloroethane	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	79-00-5	1
Tetrachloroethene	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	127-18-4	1
Dibromochloromethane	55	ug/L	1	SW8260B	08/23/13 12:59	WAT	124-48-1	1
Chlorobenzene	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	108-90-7	1
1,1,2,2-Tetrachloroethane	53	ug/L	1	SW8260B	08/23/13 12:59	WAT	79-34-5	1
Ethylbenzene	55	ug/L	1	SW8260B	08/23/13 12:59	WAT	100-41-4	1
p,m-Xylene	105	ug/L	2	SW8260B	08/23/13 12:59	WAT		1
o-Xylene	56	ug/L	1	SW8260B	08/23/13 12:59	WAT	95-47-6	1
Styrene	53	ug/L	1	SW8260B	08/23/13 12:59	WAT	100-42-5	1
Isopropylbenzene	55	ug/L	1	SW8260B	08/23/13 12:59	WAT	98-82-8	1
Bromoform	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	75-25-2	1
1,3-Dichlorobenzene	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	541-73-1	1
1,4-Dichlorobenzene	54	ug/L	1	SW8260B	08/23/13 12:59	WAT	106-46-7	1
1,2-Dichlorobenzene	53	ug/L	1	SW8260B	08/23/13 12:59	WAT	95-50-1	1
1,2,4-Trichlorobenzene	49	ug/L	1	SW8260B	08/23/13 12:59	WAT	120-82-1	1
1,2-Dibromoethane	55	ug/L	1	SW8260B	08/23/13 12:59	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	46	ug/L	1	SW8260B	08/23/13 12:59	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57735.04
Sample Tag: Trip Blank
Collected Date/Time: 08/21/2013 07:00
Matrix: Groundwater
COC Reference: 75455

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:45	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 14:33	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 15:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 15:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 15:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 15:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 15:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	79-34-5	

Lab Sample ID: S57735.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 15:04	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:04	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57735.05
Sample Tag: P2-SB-20
Collected Date/Time: 08/21/2013 12:40
Matrix: Groundwater
COC Reference: 75455

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:45	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:24	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 16:21	PER	7440-36-0	
Arsenic, Dissolved	0.033	mg/L	0.002	SW6020	09/06/13 16:24	PER	7440-38-2	
Arsenic	0.035	mg/L	0.002	SW6020	09/06/13 16:21	PER	7440-38-2	
Barium, Dissolved	0.005	mg/L	0.005	SW6020	09/06/13 16:24	PER	7440-39-3	
Barium	0.031	mg/L	0.005	SW6020	09/06/13 16:21	PER	7440-39-3	
Boron, Dissolved	0.17	mg/L	0.04	SW6020	09/06/13 16:24	PER	7440-42-8	
Boron	0.16	mg/L	0.04	SW6020	09/06/13 16:21	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/06/13 16:24	PER	7440-43-9	
Cadmium	0.0009	mg/L	0.0005	SW6020	09/06/13 16:21	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:24	PER	7440-47-3	
Chromium	0.009	mg/L	0.005	SW6020	09/06/13 16:21	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:24	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 16:21	PER	7440-48-4	
Copper, Dissolved	0.008	mg/L	0.005	SW6020	09/06/13 16:24	PER	7440-50-8	
Copper	0.014	mg/L	0.005	SW6020	09/06/13 16:21	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/06/13 16:24	PER	7439-92-1	
Lead	0.004	mg/L	0.003	SW6020	09/06/13 16:21	PER	7439-92-1	
Manganese, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:24	PER	7439-96-5	
Manganese	0.045	mg/L	0.005	SW6020	09/06/13 16:21	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:04	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:02	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:24	PER	7440-02-0	
Nickel	0.009	mg/L	0.005	SW6020	09/06/13 16:21	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 16:24	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 16:21	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/06/13 16:24	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 16:21	PER	7440-22-4	
Vanadium, Dissolved	0.019	mg/L	0.005	SW6020	09/06/13 16:24	PER	7440-62-2	
Vanadium	0.024	mg/L	0.005	SW6020	09/06/13 16:21	PER	7440-62-2	
Zinc, Dissolved	0.007	mg/L	0.005	SW6020	09/06/13 16:24	PER	7440-66-6	
Zinc	0.023	mg/L	0.005	SW6020	09/06/13 16:21	PER	7440-66-6	

Lab Sample ID: S57735.05 (continued)
Sample Tag: P2-SB-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 23:41	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/28/13 23:41	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	88-75-5	

Lab Sample ID: S57735.05 (continued)
Sample Tag: P2-SB-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 23:41	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 14:51	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 15:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 15:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 15:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 15:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 15:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	108-87-2	

Lab Sample ID: S57735.05 (continued)
Sample Tag: P2-SB-20

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 15:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:24	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75455

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lance Rogers
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Lance.Rogers@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 2 B006 4479
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wallis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC SM14	TCL SVOC	Mass TAL Metal	TOC Metal
57735.01	8.21.13	9:45	P2-MW-02	GW	7	2	3	2					X	X	X	X
.02	8.21.13	9:45	P2-MW-02 MS	GW	7	2	3	2					X	X	X	X
.03	8.21.13	9:45	P2-MW-02 MSMSD	GW	7	2	3	2					X	X	X	X
.04	8.21.13	9:00	Trip Blank	GW	1		1						X			
.05	8.21.13	12:40	P2-SB20	GW	7	2	3	2					X	X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE	TIME
Cliff Wallis		8.21.13	1245
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8/21/13	1245
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Merit		8-21-13	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Tabitha Faust		8-21-13	1345

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	8/21/13	1305
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Merit	8-21-13	1305

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57756.01(01)
Generated on 09/09/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57756.01-S57756.02
Project: Plant 6
Collected Date: 08/21/2013
Submitted Date/Time: 08/22/2013 10:00
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57756.01	MW-02-02 (82113)	Groundwater	08/21/2013 13:00
S57756.02	Trip Blank	Groundwater	08/21/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57756.01
Sample Tag: MW-02-02 (82113)
Collected Date/Time: 08/21/2013 13:00
Matrix: Groundwater
COC Reference: 75248

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	246	mg/L	1	2320B	08/28/13 13:08	JDP		
Carbon Dioxide	156	mg/L	10	4500-CO2C	08/22/13 11:10	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 09:55	JDP	14797-55-8	
Sulfate	44	mg/L	5	E300.0	08/23/13 09:55	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 17:08	PER	7440-36-0	
Arsenic	0.029	mg/L	0.002	SW6020	09/06/13 17:08	PER	7440-38-2	
Barium	1.12	mg/L	0.005	SW6020	09/06/13 17:08	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	09/06/13 17:08	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 17:08	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 17:08	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 17:08	PER	7440-48-4	
Copper	0.016	mg/L	0.005	SW6020	09/06/13 17:08	PER	7440-50-8	
Iron, Dissolved	5.74	mg/L	0.02	E200.8	09/06/13 17:10	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 17:08	PER	7439-92-1	
Manganese, Dissolved	0.116	mg/L	0.005	E200.8	09/06/13 17:10	PER	7439-96-5	
Manganese	0.124	mg/L	0.005	SW6020	09/06/13 17:08	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:30	CCM	7439-97-6	
Nickel	0.027	mg/L	0.005	SW6020	09/06/13 17:08	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 17:08	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 17:08	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 17:08	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020	09/06/13 17:08	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	92-52-4	

Lab Sample ID: S57756.01 (continued)
Sample Tag: MW-02-02 (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/31/13 00:22	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/31/13 00:22	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/31/13 00:22	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	91-20-3	

Lab Sample ID: S57756.01 (continued)
Sample Tag: MW-02-02 (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/31/13 00:22	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/31/13 00:22	JGH	118-74-1	
Organics - Volatiles								
1,4-Dioxane	23	ug/L	5	SW8260B - SIM	08/22/13 20:45	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 16:58	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 16:58	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 16:58	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 16:58	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 16:58	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	124-48-1	

Lab Sample ID: S57756.01 (continued)
Sample Tag: MW-02-02 (82113)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 16:58	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 16:58	WAT	96-12-8	
Organics								
Methane in Water	190	ug/L	2.0	RSK-175	08/29/13 13:06	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57756.02
Sample Tag: Trip Blank
Collected Date/Time: 08/21/2013 07:00
Matrix: Groundwater
COC Reference: 75248

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 16:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 17:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 17:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 17:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 17:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 17:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	79-34-5	

Lab Sample ID: S57756.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 17:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:19	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75248

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lance Rogers
COMPANY: Anacapa
ADDRESS: 10599 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: LanceRogers@Anacapa.us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelter

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC SIM+4	TCL SVOC	Ass & Mg	TAL Metal	Methane	Alk, Cl, Sp, NO3, SO4
577561.01	8.21.13	13:00	MW-02-02 (8213)	GW	11	3	6	2					X	X	X	X	X	X
.02	8.21.13	7:00	TRIP BLANK	GW	1													

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE 8/21/13	TIME 1730	
RECEIVED BY: SIGNATURE/ORGANIZATION: PM Storage		DATE 8/21/13	TIME 1730	
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8-22-13	TIME 915	

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 8.22.13	TIME 10:00
RECEIVED BY: SIGNATURE/ORGANIZATION: Barbara Ball		DATE 8/22/13	TIME 10:00
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308449	08/23/2013	S57756

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308449**
Project:	Subcontract Lab Services	Description:	S57756
Client Sample ID:	**57756.01**	Sampled:	08/21/13 13:00
Lab Sample ID:	**1308449-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/23/13 13:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**190**	2.0	ug/L	4	RSK-175	08/29/13 13:06	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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29-15

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

#1308449
75470

Rack # 254 BLUE

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557756
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	
-01	8121	1300	57756.01	GW	3		X						X	*Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/22/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: FedEx 466 4770 3595 1 8050 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Trimatrix DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] DATE: 8/23/13 TIME: 1330
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
NOTES: TEMP. ON ARRIVAL 3.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERITS SAMPLE ACCEPTANCE POLICY AS STATED HERE

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit — Work Order #: 1308449

Receipt Record Page/Line # — New / Add To — Project Chemist — Sample #s

Recorded by (initials/date): JR 8/23/13

☑ Cooler ☐ Box ☐ Other — Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Client Red Med.	1414	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1 2.8	-	2.8
2 4.3	-	4.3
3 2.9	-	2.9
Average °C		3.3
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Initials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/23/13 1330	8/23/13 1425	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

Analytical Laboratory Report

Report ID: S57754.01(01)
Generated on 09/09/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57754.01-S57754.04
Project: RACER Lansing/Plant 3
Collected Date: 08/21/2013
Submitted Date/Time: 08/22/2013 09:15
Sampled by: Unknown
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57754.01	MW-06 (08212013)	Groundwater	08/21/2013 15:30
S57754.02	DUP-06 (08212013)	Groundwater	08/21/2013 00:01
S57754.03	EQUIPMENT BLANK-6 (08212013)	Liquid	08/21/2013 16:25
S57754.04	TRIP BLANK (08212013)	Liquid	08/21/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57754.01
Sample Tag: MW-06 (08212013)
Collected Date/Time: 08/21/2013 15:30
Matrix: Groundwater
COC Reference: 75453

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR
2	1L Amber	None	Yes	4.9	IR
1	125ml Plastic	HNO3	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 17:00	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/06/13 17:00	PER	7440-38-2	
Barium	0.038	mg/L	0.005	SW6020	09/06/13 17:00	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	09/06/13 17:00	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 17:00	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 17:00	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 17:00	PER	7440-48-4	
Copper	0.059	mg/L	0.005	SW6020	09/06/13 17:00	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 17:00	PER	7439-92-1	
Manganese	0.210	mg/L	0.005	SW6020	09/06/13 17:00	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:24	CCM	7439-97-6	
Nickel	0.007	mg/L	0.005	SW6020	09/06/13 17:00	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 17:00	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 17:00	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 17:00	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/06/13 17:00	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	91-58-7	

Lab Sample ID: S57754.01 (continued)
Sample Tag: MW-06 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/30/13 22:39	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/30/13 22:39	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	4	ug/L	1	SW8270C	08/30/13 22:39	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/30/13 22:39	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/30/13 22:39	JGH	118-74-1	

Lab Sample ID: S57754.01 (continued)
Sample Tag: MW-06 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 16:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 20:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 20:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 20:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	156-60-5	
1,1-Dichloroethane	4	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	67-66-3	
1,1,1-Trichloroethane	35	ug/L	1	SW8260B	08/23/13 20:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 20:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 20:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 20:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	120-82-1	

Lab Sample ID: S57754.01 (continued)
Sample Tag: MW-06 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:52	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57754.02
Sample Tag: DUP-06 (08212013)
Collected Date/Time: 08/21/2013 00:01
Matrix: Groundwater
COC Reference: 75453

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR
2	1L Amber	None	Yes	4.9	IR
1	125ml Plastic	HNO3	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 17:02	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/06/13 17:02	PER	7440-38-2	
Barium	0.041	mg/L	0.005	SW6020	09/06/13 17:02	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	09/06/13 17:02	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 17:02	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 17:02	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 17:02	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/06/13 17:02	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 17:02	PER	7439-92-1	
Manganese	0.204	mg/L	0.005	SW6020	09/06/13 17:02	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:26	CCM	7439-97-6	
Nickel	0.007	mg/L	0.005	SW6020	09/06/13 17:02	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 17:02	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 17:02	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 17:02	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/06/13 17:02	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	91-58-7	

Lab Sample ID: S57754.02 (continued)
Sample Tag: DUP-06 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/30/13 23:13	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	08/30/13 23:13	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/30/13 23:13	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/30/13 23:13	JGH	118-74-1	

Lab Sample ID: S57754.02 (continued)
Sample Tag: DUP-06 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 16:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 21:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 21:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 21:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	156-60-5	
1,1-Dichloroethane	4	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	67-66-3	
1,1,1-Trichloroethane	39	ug/L	1	SW8260B	08/23/13 21:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 21:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 21:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 21:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	120-82-1	

Lab Sample ID: S57754.02 (continued)
Sample Tag: DUP-06 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:12	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57754.03
Sample Tag: EQUIPMENT BLANK-6 (08212013)
Collected Date/Time: 08/21/2013 16:25
Matrix: Liquid
COC Reference: 75453

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR
2	1L Amber	None	Yes	4.9	IR
1	125ml Plastic	HNO3	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/06/13 15:56	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/06/13 15:56	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 15:56	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 15:56	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:28	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 15:56	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/06/13 15:56	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	91-58-7	

Lab Sample ID: S57754.03 (continued)
Sample Tag: EQUIPMENT BLANK-6 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/30/13 23:47	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	08/30/13 23:47	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/30/13 23:47	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/30/13 23:47	JGH	118-74-1	

Lab Sample ID: S57754.03 (continued)
Sample Tag: EQUIPMENT BLANK-6 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 16:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 21:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 21:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 21:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 21:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 21:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 21:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	120-82-1	

Lab Sample ID: S57754.03 (continued)
Sample Tag: EQUIPMENT BLANK-6 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:32	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57754.04
Sample Tag: TRIP BLANK (08212013)
Collected Date/Time: 08/21/2013 00:01
Matrix: Liquid
COC Reference: 75453

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/26/13 10:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 17:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 21:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 21:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 21:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 21:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 21:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	79-34-5	

Lab Sample ID: S57754.04 (continued)
Sample Tag: TRIP BLANK (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 21:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 21:52	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75453

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DR. SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8837 P.O. NO.: B0064450.2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING / RCAN1-3
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 14-D SIMS	TCL SVOC	TAL METALS
57754.01	8/21/13	15:30	MW-06 (08212013)	GW	6	2	3	1					3	2	1
.02	8/21/13	—	DUP-06 (08212013)	GW	6	2	3	1					3	2	1
.03	8/21/13	16:25	EQUIPMENT BLANK-6 (08212013)	L	6	2	3	1					3	2	1
.04	—	—	TRIP BLANK (08212013)	L	2		2						2		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
ARCADIS ☐ Sampler	8.21.13	16:45
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
FedEx	8-21-13	17:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	8-21-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
MKE Shipping	8-21-13	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
MKE	8-22-13	9:15

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.9

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

8/22/13 10:00

Analytical Laboratory Report

Report ID: S57755.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57755.01-S57755.04
Project: B0064480.2013
Collected Date: 08/21/2013
Submitted Date/Time: 08/22/2013 09:15
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57755.01	UNK-10 (08212013)	Groundwater	08/21/2013 14:38
S57755.02	UNK-10 (08212013) MS	Groundwater	08/21/2013 14:38
S57755.03	UNK-10 (08212013) MSD	Groundwater	08/21/2013 14:38
S57755.04	TRIP BLANK (08212013)	Groundwater	08/21/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57755.01
Sample Tag: UNK-10 (08212013)
Collected Date/Time: 08/21/2013 14:38
Matrix: Groundwater
COC Reference: 75451

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 15:23	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020	09/09/13 15:23	PER	7440-38-2	
Barium	0.040	mg/L	0.005	SW6020	09/09/13 15:23	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020	09/09/13 15:23	PER	7440-42-8	
Cadmium	0.0008	mg/L	0.0005	SW6020	09/09/13 15:23	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 15:23	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 15:23	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 15:23	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 15:23	PER	7439-92-1	
Manganese	0.285	mg/L	0.005	SW6020	09/09/13 15:23	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:14	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	09/09/13 15:23	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 15:23	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 15:23	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 15:23	PER	7440-62-2	
Zinc	0.057	mg/L	0.005	SW6020	09/09/13 15:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	91-58-7	

Lab Sample ID: S57755.01 (continued)
Sample Tag: UNK-10 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/30/13 19:13	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/30/13 19:13	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/30/13 19:13	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/30/13 19:13	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/30/13 19:13	JGH	118-74-1	

Lab Sample ID: S57755.01 (continued)
Sample Tag: UNK-10 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 15:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 15:58	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 15:58	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 15:58	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 15:58	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 15:58	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 15:58	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	120-82-1	

Lab Sample ID: S57755.01 (continued)
Sample Tag: UNK-10 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 15:58	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57755.02
Sample Tag: UNK-10 (08212013) MS
Collected Date/Time: 08/21/2013 14:38
Matrix: Groundwater
COC Reference: 75451

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony	0.250	mg/L	0.005	SW6020	09/09/13 15:25	PER	7440-36-0	
Arsenic	0.255	mg/L	0.002	SW6020	09/09/13 15:25	PER	7440-38-2	
Barium	0.289	mg/L	0.005	SW6020	09/09/13 15:25	PER	7440-39-3	
Boron	0.36	mg/L	0.04	SW6020	09/09/13 15:25	PER	7440-42-8	
Cadmium	0.258	mg/L	0.0005	SW6020	09/09/13 15:25	PER	7440-43-9	
Chromium	0.244	mg/L	0.005	SW6020	09/09/13 15:25	PER	7440-47-3	
Cobalt	0.240	mg/L	0.005	SW6020	09/09/13 15:25	PER	7440-48-4	
Copper	0.239	mg/L	0.005	SW6020	09/09/13 15:25	PER	7440-50-8	
Lead	0.245	mg/L	0.003	SW6020	09/09/13 15:25	PER	7439-92-1	
Manganese	0.534	mg/L	0.005	SW6020	09/09/13 15:25	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	08/23/13 15:16	CCM	7439-97-6	
Nickel	0.246	mg/L	0.005	SW6020	09/09/13 15:25	PER	7440-02-0	
Selenium	0.252	mg/L	0.005	SW6020	09/09/13 15:25	PER	7782-49-2	
Silver	0.242	mg/L	0.0005	SW6020	09/09/13 15:25	PER	7440-22-4	
Vanadium	0.253	mg/L	0.005	SW6020	09/09/13 15:25	PER	7440-62-2	
Zinc	0.306	mg/L	0.005	SW6020	09/09/13 15:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	43	ug/L	1	SW8270C	08/30/13 19:47	JGH	83-32-9	1
Acenaphthylene	48	ug/L	1	SW8270C	08/30/13 19:47	JGH	208-96-8	1
Acetophenone	36	ug/L	1	SW8270C	08/30/13 19:47	JGH	98-86-2	1
Anthracene	47	ug/L	1	SW8270C	08/30/13 19:47	JGH	120-12-7	1
Atrazine	45	ug/L	1	SW8270C	08/30/13 19:47	JGH	1912-24-9	1
1,1'-Biphenyl	41	ug/L	1	SW8270C	08/30/13 19:47	JGH	92-52-4	1
4-Bromophenyl phenyl ether	45	ug/L	1	SW8270C	08/30/13 19:47	JGH	101-55-3	1
di-n-Butyl phthalate	50	ug/L	1	SW8270C	08/30/13 19:47	JGH	84-74-2	1
Benzaldehyde	32	ug/L	1	SW8270C	08/30/13 19:47	JGH	100-52-7	1
Benzo(a)anthracene	47	ug/L	1	SW8270C	08/30/13 19:47	JGH	56-55-3	1
Benzo(a)pyrene	48	ug/L	1	SW8270C	08/30/13 19:47	JGH	50-32-8	1
Benzo(b)fluoranthene	43	ug/L	1	SW8270C	08/30/13 19:47	JGH	205-99-2	1
Benzo(ghi)perylene	70	ug/L	1	SW8270C	08/30/13 19:47	JGH	191-24-2	1
Benzo(k)fluoranthene	42	ug/L	1	SW8270C	08/30/13 19:47	JGH	207-08-9	1
Butyl benzyl phthalate	49	ug/L	1	SW8270C	08/30/13 19:47	JGH	85-68-7	1

1-Spiked at 50ug/L

Lab Sample ID: S57755.02 (continued)
Sample Tag: UNK-10 (08212013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	39	ug/L	1	SW8270C	08/30/13 19:47	JGH	91-58-7	1
2-Chlorophenol	37	ug/L	1	SW8270C	08/30/13 19:47	JGH	95-57-8	1
4-Chloro-3-methylphenol	48	ug/L	1	SW8270C	08/30/13 19:47	JGH	59-50-7	1
4-Chloroaniline	14	ug/L	1	SW8270C	08/30/13 19:47	JGH	106-47-8	1
4-Chlorophenyl phenyl ether	44	ug/L	1	SW8270C	08/30/13 19:47	JGH	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270C	08/30/13 19:47	JGH	105-60-2	1
Carbazole	46	ug/L	1	SW8270C	08/30/13 19:47	JGH	86-74-8	1
bis(2-Chloroethoxy)methane	39	ug/L	1	SW8270C	08/30/13 19:47	JGH	111-91-1	1
bis(2-Chloroethyl)ether	35	ug/L	1	SW8270C	08/30/13 19:47	JGH	111-44-4	1
bis(2-Chloroisopropyl)ether	36	ug/L	1	SW8270C	08/30/13 19:47	JGH	108-60-1	1
Chrysene	49	ug/L	1	SW8270C	08/30/13 19:47	JGH	218-01-9	1
2,4-Dichlorophenol	43	ug/L	1	SW8270C	08/30/13 19:47	JGH	120-83-2	1
2,4-Dimethylphenol	45	ug/L	1	SW8270C	08/30/13 19:47	JGH	105-67-9	1
2,4-Dinitrophenol	40	ug/L	1	SW8270C	08/30/13 19:47	JGH	51-28-5	1
2,4-Dinitrotoluene	47	ug/L	1	SW8270C	08/30/13 19:47	JGH	121-14-2	1
2,6-Dinitrotoluene	48	ug/L	1	SW8270C	08/30/13 19:47	JGH	606-20-2	1
4,6-Dinitro-2-methylphenol	49	ug/L	1	SW8270C	08/30/13 19:47	JGH	534-52-1	1
Dibenzo(ah)anthracene	73	ug/L	2	SW8270C	08/30/13 19:47	JGH	53-70-3	1
Dibenzofuran	44	ug/L	1	SW8270C	08/30/13 19:47	JGH	132-64-9	1
Diethyl phthalate	47	ug/L	1	SW8270C	08/30/13 19:47	JGH	84-66-2	1
Dimethyl phthalate	50	ug/L	1	SW8270C	08/30/13 19:47	JGH	131-11-3	1
bis(2-Ethylhexyl)phthalate	54	ug/L	1	SW8270C	08/30/13 19:47	JGH	117-81-7	1
Fluoranthene	50	ug/L	1	SW8270C	08/30/13 19:47	JGH	206-44-0	1
Fluorene	45	ug/L	1	SW8270C	08/30/13 19:47	JGH	86-73-7	1
Hexachlorobutadiene	33	ug/L	1	SW8270C	08/30/13 19:47	JGH	87-68-3	1
Hexachlorocyclopentadiene	47	ug/L	1	SW8270C	08/30/13 19:47	JGH	77-47-4	1
Hexachloroethane	30	ug/L	1	SW8270C	08/30/13 19:47	JGH	67-72-1	1
Indeno(1,2,3-cd)pyrene	71	ug/L	1	SW8270C	08/30/13 19:47	JGH	193-39-5	1
Isophorone	53	ug/L	1	SW8270C	08/30/13 19:47	JGH	78-59-1	1
2-Methylnaphthalene	41	ug/L	1	SW8270C	08/30/13 19:47	JGH	91-57-6	1
2-Methylphenol	42	ug/L	1	SW8270C	08/30/13 19:47	JGH	95-48-7	1
3-, 4-Methylphenol	45	ug/L	1	SW8270C	08/30/13 19:47	JGH	3/4-Cresol	1
2-Nitroaniline	47	ug/L	1	SW8270C	08/30/13 19:47	JGH	88-74-4	1
2-Nitrophenol	39	ug/L	1	SW8270C	08/30/13 19:47	JGH	88-75-5	1
3-Nitroaniline	34	ug/L	1	SW8270C	08/30/13 19:47	JGH	99-09-2	1
4-Nitroaniline	43	ug/L	1	SW8270C	08/30/13 19:47	JGH	100-01-6	1
4-Nitrophenol	42	ug/L	1	SW8270C	08/30/13 19:47	JGH	100-02-7	1
N-Nitrosodi-n-propylamine	39	ug/L	1	SW8270C	08/30/13 19:47	JGH	621-64-7	1
N-Nitrosodiphenylamine	45	ug/L	1	SW8270C	08/30/13 19:47	JGH	86-30-6	1
Naphthalene	37	ug/L	1	SW8270C	08/30/13 19:47	JGH	91-20-3	1
Nitrobenzene	37	ug/L	1	SW8270C	08/30/13 19:47	JGH	98-95-3	1
di-n-Octyl phthalate	51	ug/L	1	SW8270C	08/30/13 19:47	JGH	117-84-0	1
Pentachlorophenol	46	ug/L	2	SW8270C	08/30/13 19:47	JGH	87-86-5	1
Phenanthrene	46	ug/L	1	SW8270C	08/30/13 19:47	JGH	85-01-8	1
Phenol	26	ug/L	1	SW8270C	08/30/13 19:47	JGH	108-95-2	1
Pyrene	47	ug/L	1	SW8270C	08/30/13 19:47	JGH	129-00-0	1
2,4,5-Trichlorophenol	53	ug/L	1	SW8270C	08/30/13 19:47	JGH	95-95-4	1
2,4,6-Trichlorophenol	43	ug/L	1	SW8270C	08/30/13 19:47	JGH	88-06-2	1

1-Spiked at 50ug/L

Lab Sample ID: S57755.02 (continued)
Sample Tag: UNK-10 (08212013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobenzene	44	ug/L	1	SW8270C	08/30/13 19:47	JGH	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	59	ug/L	5	SW8260B - SIM	08/28/13 20:04	WAT	123-91-1	1
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	50	ug/L	1	SW8260B	08/28/13 22:25	WAT	76-13-1	1
Acetone	40	ug/L	10	SW8260B	08/28/13 22:25	WAT	67-64-1	1
Carbon disulfide	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-15-0	1
Methyl Acetate	44	ug/L	10	SW8260B	08/28/13 22:25	WAT	79-20-9	1
tert-Methyl butyl ether (MTBE)	52	ug/L	1	SW8260B	08/28/13 22:25	WAT	1634-04-4	1
2-Butanone (MEK)	43	ug/L	10	SW8260B	08/28/13 22:25	WAT	78-93-3	1
Dichlorodifluoromethane	42	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-71-8	1
Chloromethane	44	ug/L	1	SW8260B	08/28/13 22:25	WAT	74-87-3	1
Vinyl chloride	43	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-01-4	1
Bromomethane	56	ug/L	1	SW8260B	08/28/13 22:25	WAT	74-83-9	1
Chloroethane	60	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-00-3	1
Trichlorofluoromethane	58	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-69-4	1
1,1-Dichloroethene	50	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-35-4	1
Methylene chloride	48	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-09-2	1
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	08/28/13 22:25	WAT	156-60-5	1
1,1-Dichloroethane	51	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-34-3	1
cis-1,2-Dichloroethene	51	ug/L	1	SW8260B	08/28/13 22:25	WAT	156-59-2	1
Chloroform	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	67-66-3	1
1,1,1-Trichloroethane	57	ug/L	1	SW8260B	08/28/13 22:25	WAT	71-55-6	1
Cyclohexane	45	ug/L	1	SW8260B	08/28/13 22:25	WAT	110-82-7	1
4-Methyl-2-pentanone (MIBK)	52	ug/L	10	SW8260B	08/28/13 22:25	WAT	108-10-1	1
2-Hexanone	50	ug/L	10	SW8260B	08/28/13 22:25	WAT	591-78-6	1
Carbon tetrachloride	61	ug/L	1	SW8260B	08/28/13 22:25	WAT	56-23-5	1
Benzene	51	ug/L	1	SW8260B	08/28/13 22:25	WAT	71-43-2	1
1,2-Dichloroethane	55	ug/L	1	SW8260B	08/28/13 22:25	WAT	107-06-2	1
Trichloroethene	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	79-01-6	1
1,2-Dichloropropane	51	ug/L	1	SW8260B	08/28/13 22:25	WAT	78-87-5	1
Bromodichloromethane	60	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-27-4	1
Methyl cyclohexane	49	ug/L	1	SW8260B	08/28/13 22:25	WAT	108-87-2	1
cis-1,3-Dichloropropene	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	10061-01-5	1
Toluene	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	108-88-3	1
trans-1,3-Dichloropropene	54	ug/L	1	SW8260B	08/28/13 22:25	WAT	10061-02-6	1
1,1,2-Trichloroethane	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	79-00-5	1
Tetrachloroethene	54	ug/L	1	SW8260B	08/28/13 22:25	WAT	127-18-4	1
Dibromochloromethane	54	ug/L	1	SW8260B	08/28/13 22:25	WAT	124-48-1	1
Chlorobenzene	52	ug/L	1	SW8260B	08/28/13 22:25	WAT	108-90-7	1
1,1,2,2-Tetrachloroethane	51	ug/L	1	SW8260B	08/28/13 22:25	WAT	79-34-5	1
Ethylbenzene	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	100-41-4	1
p,m-Xylene	101	ug/L	2	SW8260B	08/28/13 22:25	WAT		1
o-Xylene	54	ug/L	1	SW8260B	08/28/13 22:25	WAT	95-47-6	1
Styrene	51	ug/L	1	SW8260B	08/28/13 22:25	WAT	100-42-5	1
Isopropylbenzene	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	98-82-8	1

1-Spiked at 50ug/L

Lab Sample ID: S57755.02 (continued)
Sample Tag: UNK-10 (08212013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Bromoform	52	ug/L	1	SW8260B	08/28/13 22:25	WAT	75-25-2	1
1,3-Dichlorobenzene	51	ug/L	1	SW8260B	08/28/13 22:25	WAT	541-73-1	1
1,4-Dichlorobenzene	51	ug/L	1	SW8260B	08/28/13 22:25	WAT	106-46-7	1
1,2-Dichlorobenzene	50	ug/L	1	SW8260B	08/28/13 22:25	WAT	95-50-1	1
1,2,4-Trichlorobenzene	44	ug/L	1	SW8260B	08/28/13 22:25	WAT	120-82-1	1
1,2-Dibromoethane	53	ug/L	1	SW8260B	08/28/13 22:25	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	43	ug/L	1	SW8260B	08/28/13 22:25	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57755.03
Sample Tag: UNK-10 (08212013) MSD
Collected Date/Time: 08/21/2013 14:38
Matrix: Groundwater
COC Reference: 75451

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony	0.249	mg/L	0.005	SW6020	09/09/13 15:29	PER	7440-36-0	
Arsenic	0.247	mg/L	0.002	SW6020	09/09/13 15:29	PER	7440-38-2	
Barium	0.296	mg/L	0.005	SW6020	09/09/13 15:29	PER	7440-39-3	
Boron	0.38	mg/L	0.04	SW6020	09/09/13 15:29	PER	7440-42-8	
Cadmium	0.255	mg/L	0.0005	SW6020	09/09/13 15:29	PER	7440-43-9	
Chromium	0.251	mg/L	0.005	SW6020	09/09/13 15:29	PER	7440-47-3	
Cobalt	0.244	mg/L	0.005	SW6020	09/09/13 15:29	PER	7440-48-4	
Copper	0.241	mg/L	0.005	SW6020	09/09/13 15:29	PER	7440-50-8	
Lead	0.243	mg/L	0.003	SW6020	09/09/13 15:29	PER	7439-92-1	
Manganese	0.538	mg/L	0.005	SW6020	09/09/13 15:29	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	08/23/13 15:18	CCM	7439-97-6	
Nickel	0.246	mg/L	0.005	SW6020	09/09/13 15:29	PER	7440-02-0	
Selenium	0.252	mg/L	0.005	SW6020	09/09/13 15:29	PER	7782-49-2	
Silver	0.242	mg/L	0.0005	SW6020	09/09/13 15:29	PER	7440-22-4	
Vanadium	0.253	mg/L	0.005	SW6020	09/09/13 15:29	PER	7440-62-2	
Zinc	0.303	mg/L	0.005	SW6020	09/09/13 15:29	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	47	ug/L	1	SW8270C	08/30/13 20:21	JGH	83-32-9	1
Acenaphthylene	49	ug/L	1	SW8270C	08/30/13 20:21	JGH	208-96-8	1
Acetophenone	37	ug/L	1	SW8270C	08/30/13 20:21	JGH	98-86-2	1
Anthracene	47	ug/L	1	SW8270C	08/30/13 20:21	JGH	120-12-7	1
Atrazine	45	ug/L	1	SW8270C	08/30/13 20:21	JGH	1912-24-9	1
1,1'-Biphenyl	43	ug/L	1	SW8270C	08/30/13 20:21	JGH	92-52-4	1
4-Bromophenyl phenyl ether	48	ug/L	1	SW8270C	08/30/13 20:21	JGH	101-55-3	1
di-n-Butyl phthalate	49	ug/L	1	SW8270C	08/30/13 20:21	JGH	84-74-2	1
Benzaldehyde	33	ug/L	1	SW8270C	08/30/13 20:21	JGH	100-52-7	1
Benzo(a)anthracene	47	ug/L	1	SW8270C	08/30/13 20:21	JGH	56-55-3	1
Benzo(a)pyrene	48	ug/L	1	SW8270C	08/30/13 20:21	JGH	50-32-8	1
Benzo(b)fluoranthene	45	ug/L	1	SW8270C	08/30/13 20:21	JGH	205-99-2	1
Benzo(ghi)perylene	68	ug/L	1	SW8270C	08/30/13 20:21	JGH	191-24-2	1
Benzo(k)fluoranthene	42	ug/L	1	SW8270C	08/30/13 20:21	JGH	207-08-9	1
Butyl benzyl phthalate	49	ug/L	1	SW8270C	08/30/13 20:21	JGH	85-68-7	1

1-Spiked at 52ug/L

Lab Sample ID: S57755.03 (continued)
Sample Tag: UNK-10 (08212013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	41	ug/L	1	SW8270C	08/30/13 20:21	JGH	91-58-7	1
2-Chlorophenol	38	ug/L	1	SW8270C	08/30/13 20:21	JGH	95-57-8	1
4-Chloro-3-methylphenol	48	ug/L	1	SW8270C	08/30/13 20:21	JGH	59-50-7	1
4-Chloroaniline	15	ug/L	1	SW8270C	08/30/13 20:21	JGH	106-47-8	1
4-Chlorophenyl phenyl ether	48	ug/L	1	SW8270C	08/30/13 20:21	JGH	7005-72-3	1
Caprolactam	7	ug/L	1	SW8270C	08/30/13 20:21	JGH	105-60-2	1
Carbazole	46	ug/L	1	SW8270C	08/30/13 20:21	JGH	86-74-8	1
bis(2-Chloroethoxy)methane	41	ug/L	1	SW8270C	08/30/13 20:21	JGH	111-91-1	1
bis(2-Chloroethyl)ether	35	ug/L	1	SW8270C	08/30/13 20:21	JGH	111-44-4	1
bis(2-Chloroisopropyl)ether	37	ug/L	1	SW8270C	08/30/13 20:21	JGH	108-60-1	1
Chrysene	49	ug/L	1	SW8270C	08/30/13 20:21	JGH	218-01-9	1
2,4-Dichlorophenol	45	ug/L	1	SW8270C	08/30/13 20:21	JGH	120-83-2	1
2,4-Dimethylphenol	46	ug/L	1	SW8270C	08/30/13 20:21	JGH	105-67-9	1
2,4-Dinitrophenol	41	ug/L	1	SW8270C	08/30/13 20:21	JGH	51-28-5	1
2,4-Dinitrotoluene	50	ug/L	1	SW8270C	08/30/13 20:21	JGH	121-14-2	1
2,6-Dinitrotoluene	48	ug/L	1	SW8270C	08/30/13 20:21	JGH	606-20-2	1
4,6-Dinitro-2-methylphenol	53	ug/L	1	SW8270C	08/30/13 20:21	JGH	534-52-1	1
Dibenzo(ah)anthracene	72	ug/L	2	SW8270C	08/30/13 20:21	JGH	53-70-3	1
Dibenzofuran	49	ug/L	1	SW8270C	08/30/13 20:21	JGH	132-64-9	1
Diethyl phthalate	51	ug/L	1	SW8270C	08/30/13 20:21	JGH	84-66-2	1
Dimethyl phthalate	51	ug/L	1	SW8270C	08/30/13 20:21	JGH	131-11-3	1
bis(2-Ethylhexyl)phthalate	54	ug/L	1	SW8270C	08/30/13 20:21	JGH	117-81-7	1
Fluoranthene	48	ug/L	1	SW8270C	08/30/13 20:21	JGH	206-44-0	1
Fluorene	50	ug/L	1	SW8270C	08/30/13 20:21	JGH	86-73-7	1
Hexachlorobutadiene	34	ug/L	1	SW8270C	08/30/13 20:21	JGH	87-68-3	1
Hexachlorocyclopentadiene	50	ug/L	1	SW8270C	08/30/13 20:21	JGH	77-47-4	1
Hexachloroethane	31	ug/L	1	SW8270C	08/30/13 20:21	JGH	67-72-1	1
Indeno(1,2,3-cd)pyrene	70	ug/L	1	SW8270C	08/30/13 20:21	JGH	193-39-5	1
Isophorone	56	ug/L	1	SW8270C	08/30/13 20:21	JGH	78-59-1	1
2-Methylnaphthalene	43	ug/L	1	SW8270C	08/30/13 20:21	JGH	91-57-6	1
2-Methylphenol	42	ug/L	1	SW8270C	08/30/13 20:21	JGH	95-48-7	1
3-, 4-Methylphenol	45	ug/L	1	SW8270C	08/30/13 20:21	JGH	3/4-Cresol	1
2-Nitroaniline	47	ug/L	1	SW8270C	08/30/13 20:21	JGH	88-74-4	1
2-Nitrophenol	41	ug/L	1	SW8270C	08/30/13 20:21	JGH	88-75-5	1
3-Nitroaniline	36	ug/L	1	SW8270C	08/30/13 20:21	JGH	99-09-2	1
4-Nitroaniline	48	ug/L	1	SW8270C	08/30/13 20:21	JGH	100-01-6	1
4-Nitrophenol	43	ug/L	1	SW8270C	08/30/13 20:21	JGH	100-02-7	1
N-Nitrosodi-n-propylamine	40	ug/L	1	SW8270C	08/30/13 20:21	JGH	621-64-7	1
N-Nitrosodiphenylamine	49	ug/L	1	SW8270C	08/30/13 20:21	JGH	86-30-6	1
Naphthalene	39	ug/L	1	SW8270C	08/30/13 20:21	JGH	91-20-3	1
Nitrobenzene	38	ug/L	1	SW8270C	08/30/13 20:21	JGH	98-95-3	1
di-n-Octyl phthalate	52	ug/L	1	SW8270C	08/30/13 20:21	JGH	117-84-0	1
Pentachlorophenol	46	ug/L	2	SW8270C	08/30/13 20:21	JGH	87-86-5	1
Phenanthrene	46	ug/L	1	SW8270C	08/30/13 20:21	JGH	85-01-8	1
Phenol	25	ug/L	1	SW8270C	08/30/13 20:21	JGH	108-95-2	1
Pyrene	47	ug/L	1	SW8270C	08/30/13 20:21	JGH	129-00-0	1
2,4,5-Trichlorophenol	54	ug/L	1	SW8270C	08/30/13 20:21	JGH	95-95-4	1
2,4,6-Trichlorophenol	44	ug/L	1	SW8270C	08/30/13 20:21	JGH	88-06-2	1

1-Spiked at 52ug/L

Lab Sample ID: S57755.03 (continued)
Sample Tag: UNK-10 (08212013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobenzene	44	ug/L	1	SW8270C	08/30/13 20:21	JGH	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	61	ug/L	5	SW8260B - SIM	08/28/13 20:22	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	50	ug/L	1	SW8260B	08/28/13 22:46	WAT	76-13-1	2
Acetone	40	ug/L	10	SW8260B	08/28/13 22:46	WAT	67-64-1	2
Carbon disulfide	52	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-15-0	2
Methyl Acetate	44	ug/L	10	SW8260B	08/28/13 22:46	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	1634-04-4	2
2-Butanone (MEK)	43	ug/L	10	SW8260B	08/28/13 22:46	WAT	78-93-3	2
Dichlorodifluoromethane	40	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-71-8	2
Chloromethane	44	ug/L	1	SW8260B	08/28/13 22:46	WAT	74-87-3	2
Vinyl chloride	44	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-01-4	2
Bromomethane	55	ug/L	1	SW8260B	08/28/13 22:46	WAT	74-83-9	2
Chloroethane	60	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-00-3	2
Trichlorofluoromethane	57	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-69-4	2
1,1-Dichloroethene	50	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-35-4	2
Methylene chloride	48	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	08/28/13 22:46	WAT	156-60-5	2
1,1-Dichloroethane	51	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-34-3	2
cis-1,2-Dichloroethene	52	ug/L	1	SW8260B	08/28/13 22:46	WAT	156-59-2	2
Chloroform	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	67-66-3	2
1,1,1-Trichloroethane	58	ug/L	1	SW8260B	08/28/13 22:46	WAT	71-55-6	2
Cyclohexane	45	ug/L	1	SW8260B	08/28/13 22:46	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	51	ug/L	10	SW8260B	08/28/13 22:46	WAT	108-10-1	2
2-Hexanone	51	ug/L	10	SW8260B	08/28/13 22:46	WAT	591-78-6	2
Carbon tetrachloride	61	ug/L	1	SW8260B	08/28/13 22:46	WAT	56-23-5	2
Benzene	51	ug/L	1	SW8260B	08/28/13 22:46	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260B	08/28/13 22:46	WAT	107-06-2	2
Trichloroethene	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	79-01-6	2
1,2-Dichloropropane	52	ug/L	1	SW8260B	08/28/13 22:46	WAT	78-87-5	2
Bromodichloromethane	60	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-27-4	2
Methyl cyclohexane	50	ug/L	1	SW8260B	08/28/13 22:46	WAT	108-87-2	2
cis-1,3-Dichloropropene	54	ug/L	1	SW8260B	08/28/13 22:46	WAT	10061-01-5	2
Toluene	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	108-88-3	2
trans-1,3-Dichloropropene	54	ug/L	1	SW8260B	08/28/13 22:46	WAT	10061-02-6	2
1,1,2-Trichloroethane	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	79-00-5	2
Tetrachloroethene	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	127-18-4	2
Dibromochloromethane	54	ug/L	1	SW8260B	08/28/13 22:46	WAT	124-48-1	2
Chlorobenzene	52	ug/L	1	SW8260B	08/28/13 22:46	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	51	ug/L	1	SW8260B	08/28/13 22:46	WAT	79-34-5	2
Ethylbenzene	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	100-41-4	2
p,m-Xylene	101	ug/L	2	SW8260B	08/28/13 22:46	WAT		2
o-Xylene	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	95-47-6	2
Styrene	50	ug/L	1	SW8260B	08/28/13 22:46	WAT	100-42-5	2

1-Spiked at 52ug/L
2-Spiked at 50ug/l

Lab Sample ID: S57755.03 (continued)
Sample Tag: UNK-10 (08212013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	98-82-8	1
Bromoform	52	ug/L	1	SW8260B	08/28/13 22:46	WAT	75-25-2	1
1,3-Dichlorobenzene	52	ug/L	1	SW8260B	08/28/13 22:46	WAT	541-73-1	1
1,4-Dichlorobenzene	52	ug/L	1	SW8260B	08/28/13 22:46	WAT	106-46-7	1
1,2-Dichlorobenzene	51	ug/L	1	SW8260B	08/28/13 22:46	WAT	95-50-1	1
1,2,4-Trichlorobenzene	46	ug/L	1	SW8260B	08/28/13 22:46	WAT	120-82-1	1
1,2-Dibromoethane	53	ug/L	1	SW8260B	08/28/13 22:46	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	44	ug/L	1	SW8260B	08/28/13 22:46	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57755.04
Sample Tag: TRIP BLANK (08212013)
Collected Date/Time: 08/21/2013 00:01
Matrix: Groundwater
COC Reference: 75451

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 15:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 16:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 16:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 16:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 16:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 16:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	79-34-5	

Lab Sample ID: S57755.04 (continued)
Sample Tag: TRIP BLANK (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 16:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:19	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75451

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DR
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE KOHAGEN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TLC VOC's 1,4-DIOXANE 8260 SIM	TLC SVOC's	TAL METALS
57755.01	8/21/13	1438	UNK-10 (08212013)	GW	6	2	3	1					X	X	X
.02	8/21/13	1438	UNK-10 (08212013) MS	GW	6	2	3	1					X	X	X
.03	8/21/13	1438	UNK-10 (08212013) MSD	GW	6	2	3	1					X	X	X
.04	8/21/13	—	TRIP BLANK (08212013)	—	1		1						X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE 8/21/13	TIME 1556
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8-21-13	TIME 15:26
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 8-21-13	TIME 18:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8-21-13	TIME 1800

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 8-22-13	TIME 9:15

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.7

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

8/22/13 10:00

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57758.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57758.01-S57758.05
Project: RACER Lansing PLANT 3
Collected Date: 08/21/2013
Submitted Date/Time: 08/22/2013 10:00
Sampled by: Billy J. Coben
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57758.01	UNK-11 (08212013)	Groundwater	08/21/2013 10:10
S57758.02	MW-01(3) (08212013)	Groundwater	08/21/2013 12:40
S57758.03	MW-01(3) (08212013) MS	Groundwater	08/21/2013 12:40
S57758.04	MW-01(3) (08212013) MSD	Groundwater	08/21/2013 12:40
S57758.05	Trip Blank	Groundwater	08/21/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57758.01
Sample Tag: UNK-11 (08212013)
Collected Date/Time: 08/21/2013 10:10
Matrix: Groundwater
COC Reference: 75367

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 14:44	PER	7440-36-0	
Arsenic	0.013	mg/L	0.002	SW6020	09/09/13 14:44	PER	7440-38-2	
Barium	0.069	mg/L	0.005	SW6020	09/09/13 14:44	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	09/09/13 14:44	PER	7440-42-8	
Cadmium	0.0005	mg/L	0.0005	SW6020	09/09/13 14:44	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 14:44	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 14:44	PER	7440-48-4	
Copper	0.019	mg/L	0.005	SW6020	09/09/13 14:44	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 14:44	PER	7439-92-1	
Manganese	0.162	mg/L	0.005	SW6020	09/09/13 14:44	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:04	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020	09/09/13 14:44	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 14:44	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 14:44	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 14:44	PER	7440-62-2	
Zinc	0.025	mg/L	0.005	SW6020	09/09/13 14:44	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	91-58-7	

Lab Sample ID: S57758.01 (continued)
Sample Tag: UNK-11 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/31/13 02:05	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	84-66-2	
Dimethyl phthalate	2	ug/L	1	SW8270C	08/31/13 02:05	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/31/13 02:05	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/31/13 02:05	JGH	118-74-1	

Lab Sample ID: S57758.01 (continued)
Sample Tag: UNK-11 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 15:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/29/13 16:21	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 16:21	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/29/13 16:21	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 16:21	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/29/13 16:21	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/29/13 16:21	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	120-82-1	

Lab Sample ID: S57758.01 (continued)
Sample Tag: UNK-11 (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 16:21	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57758.02
Sample Tag: MW-01(3) (08212013)
Collected Date/Time: 08/21/2013 12:40
Matrix: Groundwater
COC Reference: 75367

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
2	125ml Plastic	HNO3	Yes	4.7	IR
1	500ml Plastic	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Inorganics								
Alkalinity as CaCO3	323	mg/L	1	2320B	08/28/13 13:16	JDP		
Carbon Dioxide	132	mg/L	10	4500-CO2C	08/22/13 11:16	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 10:29	JDP	14797-55-8	
Sulfate	181	mg/L	10	E300.0	08/23/13 10:29	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 16:05	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	09/09/13 16:05	PER	7440-38-2	
Barium	0.097	mg/L	0.005	SW6020	09/09/13 16:05	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/09/13 16:05	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 16:05	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 16:05	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 16:05	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 16:05	PER	7440-50-8	
Iron, Dissolved	2.95	mg/L	0.02	E200.8	09/09/13 16:00	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 16:05	PER	7439-92-1	
Manganese, Dissolved	0.153	mg/L	0.005	E200.8	09/09/13 16:00	PER	7439-96-5	
Manganese	0.153	mg/L	0.005	SW6020	09/09/13 16:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:21	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020	09/09/13 16:05	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 16:05	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 16:05	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 16:05	PER	7440-62-2	
Zinc	0.009	mg/L	0.005	SW6020	09/09/13 16:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	92-52-4	

Lab Sample ID: S57758.02 (continued)
Sample Tag: MW-01(3) (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 15:21	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	09/03/13 15:21	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	09/03/13 15:21	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	91-20-3	

Lab Sample ID: S57758.02 (continued)
Sample Tag: MW-01(3) (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 15:21	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 15:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 16:12	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 16:12	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 16:12	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 16:12	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 16:12	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	124-48-1	

Lab Sample ID: S57758.02 (continued)
Sample Tag: MW-01(3) (08212013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 16:12	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:12	WAT	96-12-8	
Organics								
Methane in Water	1.9	ug/L	0.5	RSK-175	08/29/13 13:17	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57758.03
Sample Tag: MW-01(3) (08212013) MS
Collected Date/Time: 08/21/2013 12:40
Matrix: Groundwater
COC Reference: 75367

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony	0.253	mg/L	0.005	SW6020	09/09/13 16:16	PER	7440-36-0	
Arsenic	0.253	mg/L	0.002	SW6020	09/09/13 16:16	PER	7440-38-2	
Barium	0.359	mg/L	0.005	SW6020	09/09/13 16:16	PER	7440-39-3	
Boron	0.30	mg/L	0.04	SW6020	09/09/13 16:16	PER	7440-42-8	
Cadmium	0.257	mg/L	0.0005	SW6020	09/09/13 16:16	PER	7440-43-9	
Chromium	0.241	mg/L	0.005	SW6020	09/09/13 16:16	PER	7440-47-3	
Cobalt	0.239	mg/L	0.005	SW6020	09/09/13 16:16	PER	7440-48-4	
Copper	0.235	mg/L	0.005	SW6020	09/09/13 16:16	PER	7440-50-8	
Lead	0.237	mg/L	0.003	SW6020	09/09/13 16:16	PER	7439-92-1	
Manganese	0.396	mg/L	0.005	SW6020	09/09/13 16:16	PER	7439-96-5	
Mercury	0.0019	mg/L	0.0001	SW7471A	08/26/13 15:23	CCM	7439-97-6	
Nickel	0.246	mg/L	0.005	SW6020	09/09/13 16:16	PER	7440-02-0	
Selenium	0.253	mg/L	0.005	SW6020	09/09/13 16:16	PER	7782-49-2	
Silver	0.241	mg/L	0.0005	SW6020	09/09/13 16:16	PER	7440-22-4	
Vanadium	0.246	mg/L	0.005	SW6020	09/09/13 16:16	PER	7440-62-2	
Zinc	0.257	mg/L	0.005	SW6020	09/09/13 16:16	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	40	ug/L	1	SW8270C	09/03/13 15:55	PL	83-32-9	1
Acenaphthylene	45	ug/L	1	SW8270C	09/03/13 15:55	PL	208-96-8	1
Acetophenone	34	ug/L	1	SW8270C	09/03/13 15:55	PL	98-86-2	1
Anthracene	43	ug/L	1	SW8270C	09/03/13 15:55	PL	120-12-7	1
Atrazine	42	ug/L	1	SW8270C	09/03/13 15:55	PL	1912-24-9	1
1,1'-Biphenyl	39	ug/L	1	SW8270C	09/03/13 15:55	PL	92-52-4	1
4-Bromophenyl phenyl ether	42	ug/L	1	SW8270C	09/03/13 15:55	PL	101-55-3	1
di-n-Butyl phthalate	46	ug/L	1	SW8270C	09/03/13 15:55	PL	84-74-2	1
Benzaldehyde	30	ug/L	1	SW8270C	09/03/13 15:55	PL	100-52-7	1
Benzo(a)anthracene	43	ug/L	1	SW8270C	09/03/13 15:55	PL	56-55-3	1
Benzo(a)pyrene	44	ug/L	1	SW8270C	09/03/13 15:55	PL	50-32-8	1
Benzo(b)fluoranthene	39	ug/L	1	SW8270C	09/03/13 15:55	PL	205-99-2	1
Benzo(ghi)perylene	77	ug/L	1	SW8270C	09/03/13 15:55	PL	191-24-2	1
Benzo(k)fluoranthene	39	ug/L	1	SW8270C	09/03/13 15:55	PL	207-08-9	1
Butyl benzyl phthalate	44	ug/L	1	SW8270C	09/03/13 15:55	PL	85-68-7	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57758.03 (continued)
Sample Tag: MW-01(3) (08212013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	36	ug/L	1	SW8270C	09/03/13 15:55	PL	91-58-7	1
2-Chlorophenol	34	ug/L	1	SW8270C	09/03/13 15:55	PL	95-57-8	1
4-Chloro-3-methylphenol	43	ug/L	1	SW8270C	09/03/13 15:55	PL	59-50-7	1
4-Chloroaniline	12	ug/L	1	SW8270C	09/03/13 15:55	PL	106-47-8	1
4-Chlorophenyl phenyl ether	41	ug/L	1	SW8270C	09/03/13 15:55	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270C	09/03/13 15:55	PL	105-60-2	1
Carbazole	42	ug/L	1	SW8270C	09/03/13 15:55	PL	86-74-8	1
bis(2-Chloroethoxy)methane	36	ug/L	1	SW8270C	09/03/13 15:55	PL	111-91-1	1
bis(2-Chloroethyl)ether	32	ug/L	1	SW8270C	09/03/13 15:55	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	33	ug/L	1	SW8270C	09/03/13 15:55	PL	108-60-1	1
Chrysene	45	ug/L	1	SW8270C	09/03/13 15:55	PL	218-01-9	1
2,4-Dichlorophenol	39	ug/L	1	SW8270C	09/03/13 15:55	PL	120-83-2	1
2,4-Dimethylphenol	41	ug/L	1	SW8270C	09/03/13 15:55	PL	105-67-9	1
2,4-Dinitrophenol	34	ug/L	1	SW8270C	09/03/13 15:55	PL	51-28-5	1
2,4-Dinitrotoluene	44	ug/L	1	SW8270C	09/03/13 15:55	PL	121-14-2	1
2,6-Dinitrotoluene	43	ug/L	1	SW8270C	09/03/13 15:55	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	44	ug/L	1	SW8270C	09/03/13 15:55	PL	534-52-1	1
Dibenzo(ah)anthracene	75	ug/L	2	SW8270C	09/03/13 15:55	PL	53-70-3	1
Dibenzofuran	42	ug/L	1	SW8270C	09/03/13 15:55	PL	132-64-9	1
Diethyl phthalate	44	ug/L	1	SW8270C	09/03/13 15:55	PL	84-66-2	1
Dimethyl phthalate	47	ug/L	1	SW8270C	09/03/13 15:55	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	49	ug/L	1	SW8270C	09/03/13 15:55	PL	117-81-7	1
Fluoranthene	44	ug/L	1	SW8270C	09/03/13 15:55	PL	206-44-0	1
Fluorene	42	ug/L	1	SW8270C	09/03/13 15:55	PL	86-73-7	1
Hexachlorobutadiene	31	ug/L	1	SW8270C	09/03/13 15:55	PL	87-68-3	1
Hexachlorocyclopentadiene	43	ug/L	1	SW8270C	09/03/13 15:55	PL	77-47-4	1
Hexachloroethane	28	ug/L	1	SW8270C	09/03/13 15:55	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	73	ug/L	1	SW8270C	09/03/13 15:55	PL	193-39-5	1
Isophorone	49	ug/L	1	SW8270C	09/03/13 15:55	PL	78-59-1	1
2-Methylnaphthalene	39	ug/L	1	SW8270C	09/03/13 15:55	PL	91-57-6	1
2-Methylphenol	38	ug/L	1	SW8270C	09/03/13 15:55	PL	95-48-7	1
3-, 4-Methylphenol	41	ug/L	1	SW8270C	09/03/13 15:55	PL	3/4-Cresol	1
2-Nitroaniline	44	ug/L	1	SW8270C	09/03/13 15:55	PL	88-74-4	1
2-Nitrophenol	37	ug/L	1	SW8270C	09/03/13 15:55	PL	88-75-5	1
3-Nitroaniline	34	ug/L	1	SW8270C	09/03/13 15:55	PL	99-09-2	1
4-Nitroaniline	40	ug/L	1	SW8270C	09/03/13 15:55	PL	100-01-6	1
4-Nitrophenol	39	ug/L	1	SW8270C	09/03/13 15:55	PL	100-02-7	1
N-Nitrosodi-n-propylamine	36	ug/L	1	SW8270C	09/03/13 15:55	PL	621-64-7	1
N-Nitrosodiphenylamine	42	ug/L	1	SW8270C	09/03/13 15:55	PL	86-30-6	1
Naphthalene	34	ug/L	1	SW8270C	09/03/13 15:55	PL	91-20-3	1
Nitrobenzene	34	ug/L	1	SW8270C	09/03/13 15:55	PL	98-95-3	1
di-n-Octyl phthalate	46	ug/L	1	SW8270C	09/03/13 15:55	PL	117-84-0	1
Pentachlorophenol	41	ug/L	1	SW8270C	09/03/13 15:55	PL	87-86-5	1
Phenanthrene	42	ug/L	1	SW8270C	09/03/13 15:55	PL	85-01-8	1
Phenol	23	ug/L	1	SW8270C	09/03/13 15:55	PL	108-95-2	1
Pyrene	42	ug/L	1	SW8270C	09/03/13 15:55	PL	129-00-0	1
2,4,5-Trichlorophenol	50	ug/L	1	SW8270C	09/03/13 15:55	PL	95-95-4	1
2,4,6-Trichlorophenol	39	ug/L	1	SW8270C	09/03/13 15:55	PL	88-06-2	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57758.03 (continued)
Sample Tag: MW-01(3) (08212013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobenzene	41	ug/L	1	SW8270C	09/03/13 15:55	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	52	ug/L	5	SW8260B - SIM	08/28/13 20:39	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	54	ug/L	1	SW8260B	08/28/13 19:28	WAT	76-13-1	2
Acetone	68	ug/L	10	SW8260B	08/28/13 19:28	WAT	67-64-1	2
Carbon disulfide	42	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-15-0	2
Methyl Acetate	55	ug/L	10	SW8260B	08/28/13 19:28	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	53	ug/L	1	SW8260B	08/28/13 19:28	WAT	1634-04-4	2
2-Butanone (MEK)	63	ug/L	10	SW8260B	08/28/13 19:28	WAT	78-93-3	2
Dichlorodifluoromethane	51	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-71-8	2
Chloromethane	55	ug/L	1	SW8260B	08/28/13 19:28	WAT	74-87-3	2
Vinyl chloride	52	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-01-4	2
Bromomethane	54	ug/L	1	SW8260B	08/28/13 19:28	WAT	74-83-9	2
Chloroethane	56	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-00-3	2
Trichlorofluoromethane	53	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-69-4	2
1,1-Dichloroethene	52	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-35-4	2
Methylene chloride	52	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-09-2	2
trans-1,2-Dichloroethene	51	ug/L	1	SW8260B	08/28/13 19:28	WAT	156-60-5	2
1,1-Dichloroethane	55	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-34-3	2
cis-1,2-Dichloroethene	57	ug/L	1	SW8260B	08/28/13 19:28	WAT	156-59-2	2
Chloroform	54	ug/L	1	SW8260B	08/28/13 19:28	WAT	67-66-3	2
1,1,1-Trichloroethane	51	ug/L	1	SW8260B	08/28/13 19:28	WAT	71-55-6	2
Cyclohexane	55	ug/L	1	SW8260B	08/28/13 19:28	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	60	ug/L	10	SW8260B	08/28/13 19:28	WAT	108-10-1	2
2-Hexanone	63	ug/L	10	SW8260B	08/28/13 19:28	WAT	591-78-6	2
Carbon tetrachloride	55	ug/L	1	SW8260B	08/28/13 19:28	WAT	56-23-5	2
Benzene	55	ug/L	1	SW8260B	08/28/13 19:28	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260B	08/28/13 19:28	WAT	107-06-2	2
Trichloroethene	55	ug/L	1	SW8260B	08/28/13 19:28	WAT	79-01-6	2
1,2-Dichloropropane	56	ug/L	1	SW8260B	08/28/13 19:28	WAT	78-87-5	2
Bromodichloromethane	54	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-27-4	2
Methyl cyclohexane	53	ug/L	1	SW8260B	08/28/13 19:28	WAT	108-87-2	2
cis-1,3-Dichloropropene	56	ug/L	1	SW8260B	08/28/13 19:28	WAT	10061-01-5	2
Toluene	52	ug/L	1	SW8260B	08/28/13 19:28	WAT	108-88-3	2
trans-1,3-Dichloropropene	52	ug/L	1	SW8260B	08/28/13 19:28	WAT	10061-02-6	2
1,1,2-Trichloroethane	57	ug/L	1	SW8260B	08/28/13 19:28	WAT	79-00-5	2
Tetrachloroethene	53	ug/L	1	SW8260B	08/28/13 19:28	WAT	127-18-4	2
Dibromochloromethane	49	ug/L	1	SW8260B	08/28/13 19:28	WAT	124-48-1	2
Chlorobenzene	51	ug/L	1	SW8260B	08/28/13 19:28	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	53	ug/L	1	SW8260B	08/28/13 19:28	WAT	79-34-5	2
Ethylbenzene	47	ug/L	1	SW8260B	08/28/13 19:28	WAT	100-41-4	2
p,m-Xylene	77	ug/L	2	SW8260B	08/28/13 19:28	WAT		2
o-Xylene	41	ug/L	1	SW8260B	08/28/13 19:28	WAT	95-47-6	2
Styrene	9	ug/L	1	SW8260B	08/28/13 19:28	WAT	100-42-5	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S57758.03 (continued)
Sample Tag: MW-01(3) (08212013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	48	ug/L	1	SW8260B	08/28/13 19:28	WAT	98-82-8	1
Bromoform	43	ug/L	1	SW8260B	08/28/13 19:28	WAT	75-25-2	1
1,3-Dichlorobenzene	50	ug/L	1	SW8260B	08/28/13 19:28	WAT	541-73-1	1
1,4-Dichlorobenzene	50	ug/L	1	SW8260B	08/28/13 19:28	WAT	106-46-7	1
1,2-Dichlorobenzene	51	ug/L	1	SW8260B	08/28/13 19:28	WAT	95-50-1	1
1,2,4-Trichlorobenzene	49	ug/L	1	SW8260B	08/28/13 19:28	WAT	120-82-1	1
1,2-Dibromoethane	51	ug/L	1	SW8260B	08/28/13 19:28	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	54	ug/L	1	SW8260B	08/28/13 19:28	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57758.04
Sample Tag: MW-01(3) (08212013) MSD
Collected Date/Time: 08/21/2013 12:40
Matrix: Groundwater
COC Reference: 75367

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony	0.254	mg/L	0.005	SW6020	09/09/13 16:25	PER	7440-36-0	
Arsenic	0.249	mg/L	0.002	SW6020	09/09/13 16:25	PER	7440-38-2	
Barium	0.369	mg/L	0.005	SW6020	09/09/13 16:25	PER	7440-39-3	
Boron	0.29	mg/L	0.04	SW6020	09/09/13 16:25	PER	7440-42-8	
Cadmium	0.255	mg/L	0.0005	SW6020	09/09/13 16:25	PER	7440-43-9	
Chromium	0.243	mg/L	0.005	SW6020	09/09/13 16:25	PER	7440-47-3	
Cobalt	0.235	mg/L	0.005	SW6020	09/09/13 16:25	PER	7440-48-4	
Copper	0.229	mg/L	0.005	SW6020	09/09/13 16:25	PER	7440-50-8	
Lead	0.237	mg/L	0.003	SW6020	09/09/13 16:25	PER	7439-92-1	
Manganese	0.399	mg/L	0.005	SW6020	09/09/13 16:25	PER	7439-96-5	
Mercury	0.0019	mg/L	0.0001	SW7471A	08/26/13 15:25	CCM	7439-97-6	
Nickel	0.246	mg/L	0.005	SW6020	09/09/13 16:25	PER	7440-02-0	
Selenium	0.234	mg/L	0.005	SW6020	09/09/13 16:25	PER	7782-49-2	
Silver	0.240	mg/L	0.0005	SW6020	09/09/13 16:25	PER	7440-22-4	
Vanadium	0.247	mg/L	0.005	SW6020	09/09/13 16:25	PER	7440-62-2	
Zinc	0.256	mg/L	0.005	SW6020	09/09/13 16:25	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	40	ug/L	1	SW8270C	09/03/13 16:29	PL	83-32-9	1
Acenaphthylene	44	ug/L	1	SW8270C	09/03/13 16:29	PL	208-96-8	1
Acetophenone	33	ug/L	1	SW8270C	09/03/13 16:29	PL	98-86-2	1
Anthracene	43	ug/L	1	SW8270C	09/03/13 16:29	PL	120-12-7	1
Atrazine	42	ug/L	1	SW8270C	09/03/13 16:29	PL	1912-24-9	1
1,1'-Biphenyl	38	ug/L	1	SW8270C	09/03/13 16:29	PL	92-52-4	1
4-Bromophenyl phenyl ether	42	ug/L	1	SW8270C	09/03/13 16:29	PL	101-55-3	1
di-n-Butyl phthalate	46	ug/L	1	SW8270C	09/03/13 16:29	PL	84-74-2	1
Benzaldehyde	29	ug/L	1	SW8270C	09/03/13 16:29	PL	100-52-7	1
Benzo(a)anthracene	43	ug/L	1	SW8270C	09/03/13 16:29	PL	56-55-3	1
Benzo(a)pyrene	44	ug/L	1	SW8270C	09/03/13 16:29	PL	50-32-8	1
Benzo(b)fluoranthene	40	ug/L	1	SW8270C	09/03/13 16:29	PL	205-99-2	1
Benzo(ghi)perylene	76	ug/L	1	SW8270C	09/03/13 16:29	PL	191-24-2	1
Benzo(k)fluoranthene	37	ug/L	1	SW8270C	09/03/13 16:29	PL	207-08-9	1
Butyl benzyl phthalate	44	ug/L	1	SW8270C	09/03/13 16:29	PL	85-68-7	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57758.04 (continued)
Sample Tag: MW-01(3) (08212013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	35	ug/L	1	SW8270C	09/03/13 16:29	PL	91-58-7	1
2-Chlorophenol	33	ug/L	1	SW8270C	09/03/13 16:29	PL	95-57-8	1
4-Chloro-3-methylphenol	43	ug/L	1	SW8270C	09/03/13 16:29	PL	59-50-7	1
4-Chloroaniline	12	ug/L	1	SW8270C	09/03/13 16:29	PL	106-47-8	1
4-Chlorophenyl phenyl ether	41	ug/L	1	SW8270C	09/03/13 16:29	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270C	09/03/13 16:29	PL	105-60-2	1
Carbazole	42	ug/L	1	SW8270C	09/03/13 16:29	PL	86-74-8	1
bis(2-Chloroethoxy)methane	35	ug/L	1	SW8270C	09/03/13 16:29	PL	111-91-1	1
bis(2-Chloroethyl)ether	31	ug/L	1	SW8270C	09/03/13 16:29	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	31	ug/L	1	SW8270C	09/03/13 16:29	PL	108-60-1	1
Chrysene	45	ug/L	1	SW8270C	09/03/13 16:29	PL	218-01-9	1
2,4-Dichlorophenol	38	ug/L	1	SW8270C	09/03/13 16:29	PL	120-83-2	1
2,4-Dimethylphenol	40	ug/L	1	SW8270C	09/03/13 16:29	PL	105-67-9	1
2,4-Dinitrophenol	36	ug/L	1	SW8270C	09/03/13 16:29	PL	51-28-5	1
2,4-Dinitrotoluene	43	ug/L	1	SW8270C	09/03/13 16:29	PL	121-14-2	1
2,6-Dinitrotoluene	43	ug/L	1	SW8270C	09/03/13 16:29	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	46	ug/L	1	SW8270C	09/03/13 16:29	PL	534-52-1	1
Dibenzo(ah)anthracene	74	ug/L	2	SW8270C	09/03/13 16:29	PL	53-70-3	1
Dibenzofuran	41	ug/L	1	SW8270C	09/03/13 16:29	PL	132-64-9	1
Diethyl phthalate	43	ug/L	1	SW8270C	09/03/13 16:29	PL	84-66-2	1
Dimethyl phthalate	46	ug/L	1	SW8270C	09/03/13 16:29	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	49	ug/L	1	SW8270C	09/03/13 16:29	PL	117-81-7	1
Fluoranthene	44	ug/L	1	SW8270C	09/03/13 16:29	PL	206-44-0	1
Fluorene	42	ug/L	1	SW8270C	09/03/13 16:29	PL	86-73-7	1
Hexachlorobutadiene	28	ug/L	1	SW8270C	09/03/13 16:29	PL	87-68-3	1
Hexachlorocyclopentadiene	42	ug/L	1	SW8270C	09/03/13 16:29	PL	77-47-4	1
Hexachloroethane	25	ug/L	1	SW8270C	09/03/13 16:29	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	72	ug/L	1	SW8270C	09/03/13 16:29	PL	193-39-5	1
Isophorone	48	ug/L	1	SW8270C	09/03/13 16:29	PL	78-59-1	1
2-Methylnaphthalene	38	ug/L	1	SW8270C	09/03/13 16:29	PL	91-57-6	1
2-Methylphenol	37	ug/L	1	SW8270C	09/03/13 16:29	PL	95-48-7	1
3-, 4-Methylphenol	40	ug/L	1	SW8270C	09/03/13 16:29	PL	3/4-Cresol	1
2-Nitroaniline	42	ug/L	1	SW8270C	09/03/13 16:29	PL	88-74-4	1
2-Nitrophenol	35	ug/L	1	SW8270C	09/03/13 16:29	PL	88-75-5	1
3-Nitroaniline	34	ug/L	1	SW8270C	09/03/13 16:29	PL	99-09-2	1
4-Nitroaniline	40	ug/L	1	SW8270C	09/03/13 16:29	PL	100-01-6	1
4-Nitrophenol	38	ug/L	1	SW8270C	09/03/13 16:29	PL	100-02-7	1
N-Nitrosodi-n-propylamine	35	ug/L	1	SW8270C	09/03/13 16:29	PL	621-64-7	1
N-Nitrosodiphenylamine	41	ug/L	1	SW8270C	09/03/13 16:29	PL	86-30-6	1
Naphthalene	33	ug/L	1	SW8270C	09/03/13 16:29	PL	91-20-3	1
Nitrobenzene	33	ug/L	1	SW8270C	09/03/13 16:29	PL	98-95-3	1
di-n-Octyl phthalate	46	ug/L	1	SW8270C	09/03/13 16:29	PL	117-84-0	1
Pentachlorophenol	42	ug/L	1	SW8270C	09/03/13 16:29	PL	87-86-5	1
Phenanthrene	42	ug/L	1	SW8270C	09/03/13 16:29	PL	85-01-8	1
Phenol	22	ug/L	1	SW8270C	09/03/13 16:29	PL	108-95-2	1
Pyrene	42	ug/L	1	SW8270C	09/03/13 16:29	PL	129-00-0	1
2,4,5-Trichlorophenol	48	ug/L	1	SW8270C	09/03/13 16:29	PL	95-95-4	1
2,4,6-Trichlorophenol	39	ug/L	1	SW8270C	09/03/13 16:29	PL	88-06-2	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57758.04 (continued)
Sample Tag: MW-01(3) (08212013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobenzene	41	ug/L	1	SW8270C	09/03/13 16:29	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	50	ug/L	5	SW8260B - SIM	08/28/13 20:57	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	55	ug/L	1	SW8260B	08/28/13 19:47	WAT	76-13-1	2
Acetone	65	ug/L	10	SW8260B	08/28/13 19:47	WAT	67-64-1	2
Carbon disulfide	45	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-15-0	2
Methyl Acetate	54	ug/L	10	SW8260B	08/28/13 19:47	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	54	ug/L	1	SW8260B	08/28/13 19:47	WAT	1634-04-4	2
2-Butanone (MEK)	60	ug/L	10	SW8260B	08/28/13 19:47	WAT	78-93-3	2
Dichlorodifluoromethane	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-71-8	2
Chloromethane	55	ug/L	1	SW8260B	08/28/13 19:47	WAT	74-87-3	2
Vinyl chloride	55	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-01-4	2
Bromomethane	56	ug/L	1	SW8260B	08/28/13 19:47	WAT	74-83-9	2
Chloroethane	58	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-00-3	2
Trichlorofluoromethane	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-69-4	2
1,1-Dichloroethene	52	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-35-4	2
Methylene chloride	51	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	08/28/13 19:47	WAT	156-60-5	2
1,1-Dichloroethane	54	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-34-3	2
cis-1,2-Dichloroethene	56	ug/L	1	SW8260B	08/28/13 19:47	WAT	156-59-2	2
Chloroform	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	67-66-3	2
1,1,1-Trichloroethane	52	ug/L	1	SW8260B	08/28/13 19:47	WAT	71-55-6	2
Cyclohexane	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	61	ug/L	10	SW8260B	08/28/13 19:47	WAT	108-10-1	2
2-Hexanone	60	ug/L	10	SW8260B	08/28/13 19:47	WAT	591-78-6	2
Carbon tetrachloride	54	ug/L	1	SW8260B	08/28/13 19:47	WAT	56-23-5	2
Benzene	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	71-43-2	2
1,2-Dichloroethane	54	ug/L	1	SW8260B	08/28/13 19:47	WAT	107-06-2	2
Trichloroethene	54	ug/L	1	SW8260B	08/28/13 19:47	WAT	79-01-6	2
1,2-Dichloropropane	54	ug/L	1	SW8260B	08/28/13 19:47	WAT	78-87-5	2
Bromodichloromethane	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-27-4	2
Methyl cyclohexane	52	ug/L	1	SW8260B	08/28/13 19:47	WAT	108-87-2	2
cis-1,3-Dichloropropene	55	ug/L	1	SW8260B	08/28/13 19:47	WAT	10061-01-5	2
Toluene	49	ug/L	1	SW8260B	08/28/13 19:47	WAT	108-88-3	2
trans-1,3-Dichloropropene	50	ug/L	1	SW8260B	08/28/13 19:47	WAT	10061-02-6	2
1,1,2-Trichloroethane	54	ug/L	1	SW8260B	08/28/13 19:47	WAT	79-00-5	2
Tetrachloroethene	51	ug/L	1	SW8260B	08/28/13 19:47	WAT	127-18-4	2
Dibromochloromethane	52	ug/L	1	SW8260B	08/28/13 19:47	WAT	124-48-1	2
Chlorobenzene	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	55	ug/L	1	SW8260B	08/28/13 19:47	WAT	79-34-5	2
Ethylbenzene	48	ug/L	1	SW8260B	08/28/13 19:47	WAT	100-41-4	2
p,m-Xylene	78	ug/L	2	SW8260B	08/28/13 19:47	WAT		2
o-Xylene	42	ug/L	1	SW8260B	08/28/13 19:47	WAT	95-47-6	2
Styrene	8	ug/L	1	SW8260B	08/28/13 19:47	WAT	100-42-5	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S57758.04 (continued)
Sample Tag: MW-01(3) (08212013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Isopropylbenzene	50	ug/L	1	SW8260B	08/28/13 19:47	WAT	98-82-8	1
Bromoform	47	ug/L	1	SW8260B	08/28/13 19:47	WAT	75-25-2	1
1,3-Dichlorobenzene	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	541-73-1	1
1,4-Dichlorobenzene	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	106-46-7	1
1,2-Dichlorobenzene	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	95-50-1	1
1,2,4-Trichlorobenzene	54	ug/L	1	SW8260B	08/28/13 19:47	WAT	120-82-1	1
1,2-Dibromoethane	53	ug/L	1	SW8260B	08/28/13 19:47	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	57	ug/L	1	SW8260B	08/28/13 19:47	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57758.05
Sample Tag: Trip Blank
Collected Date/Time: 08/21/2013 00:01
Matrix: Groundwater
COC Reference: 75367

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 16:14	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	76-13-1	
Acetone	10	ug/L	10	SW8260B	08/28/13 16:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 16:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 16:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 16:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 16:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	79-34-5	

Lab Sample ID: S57758.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 16:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:32	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75367

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE, SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8837 P.O. NO.: B00644 60.2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING, PLANT-3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COBERN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1,4-D SIMS	TCL SVOC	TAL METALS	DISSOLVED Fe, Mn	SULFATE, NITRATE CO_2, ALKALINITY	METHANE				
57758.01	8/21/13	10:10	UNK-11 (08212013)	GW	6	2	3	1					3	2	1							
.02/.03/.04	8/21/13	12:40	MW-01(3) (08212013)	GW	23	7	12	4					9	6	3	1	1	3				

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Sampler DATE: 8-21-13 TIME: 16:45
RECEIVED BY: SIGNATURE/ORGANIZATION: ARCADIS DATE: 8-21-13 TIME: 17:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 8-21-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: PMR STORAGE DATE: 8-21-13 TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8-22-13 TIME: 9:15

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.7

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Barbara Ball 8/22/13 10:00

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308451	08/23/2013	S57758

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308451**
Project:	Subcontract Lab Services	Description:	S57758
Client Sample ID:	**57758.02**	Sampled:	08/21/13 12:40
Lab Sample ID:	**1308451-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/23/13 13:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**1.9**	0.50	ug/L	1	RSK-175	08/29/13 13:17	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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29-17

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308451
75472

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague SAME ☒
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557758
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	
-01	8/21	1240	57758.02	GW	3		X						X	*Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabatha Faust ☐ Sampler DATE: 8/22/13 TIME: 1605
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 595 1 8050 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Trimatrix DATE: 8/23/13 TIME: 1330
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
NOTES: TEMP. ON ARRIVAL 3.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERITS SAMPLE ACCEPTANCE POLICY LISTED ON REVERSE SIDE

TRIMATRIX LABORATORIES

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Individual sample results relate only to the sample tested.

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit
Receipt Record Page/Line #
Work Order #: 1308451
New / Add To
Project Chemist | Sample #s

Recorded by (initials/date): JR 8/23/13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)
☐ See Additional Cooler Information Form

Cooler #	Time	Recorded °C	Correction Factor °C	Actual °C
Client Red Med.	1414			
Temp Blank:				
TB location: Representative / Not Representative				
1		2.8	-	2.8
2		4.3	-	4.3
3		2.9	-	2.9
			Average °C	3.3

Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container
☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time
Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
	Average °C	

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time
Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
	Average °C	

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time
Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
	Average °C	

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____
COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Intials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		☐	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/23/13 1330	8/23/13 1425	(Yes) / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57766.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57766.01-S57766.02
Project: B0064480.2013
Collected Date: 08/22/2013
Submitted Date/Time: 08/22/2013 14:35
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified.Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57766.01	MW-13-31 (08222013)	Groundwater	08/22/2013 10:49
S57766.02	Trip Blank (08222013)	Liquid	08/22/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57766.01
Sample Tag: MW-13-31 (08222013)
Collected Date/Time: 08/22/2013 10:49
Matrix: Groundwater
COC Reference: 75488

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
3	125ml Plastic	HNO3	Yes	5.5	IR
1	500ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:50	LBR		
Inorganics								
Alkalinity as CaCO3	404	mg/L	1	2320B	08/28/13 13:18	JDP		
Carbon Dioxide	265	mg/L	10	4500-CO2C	08/22/13 15:20	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 10:41	JDP	14797-55-8	
Sulfate	57	mg/L	5	E300.0	08/23/13 10:41	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:03	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 15:01	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/09/13 15:03	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/09/13 15:01	PER	7440-38-2	
Barium, Dissolved	0.161	mg/L	0.005	SW6020	09/09/13 15:03	PER	7440-39-3	
Barium	0.198	mg/L	0.005	SW6020	09/09/13 15:01	PER	7440-39-3	
Boron, Dissolved	0.26	mg/L	0.04	SW6020	09/09/13 15:03	PER	7440-42-8	
Boron	0.28	mg/L	0.04	SW6020	09/09/13 15:01	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:03	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 15:01	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:03	PER	7440-47-3	
Chromium	0.011	mg/L	0.005	SW6020	09/09/13 15:01	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:03	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 15:01	PER	7440-48-4	
Copper, Dissolved	0.007	mg/L	0.005	SW6020	09/09/13 15:03	PER	7440-50-8	
Copper	0.018	mg/L	0.005	SW6020	09/09/13 15:01	PER	7440-50-8	
Iron, Dissolved	6.98	mg/L	0.02	E200.8	09/09/13 15:03	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 15:03	PER	7439-92-1	
Lead	0.070	mg/L	0.003	SW6020	09/09/13 15:01	PER	7439-92-1	
Manganese, Dissolved	0.606	mg/L	0.005	SW6020	09/09/13 15:03	PER	7439-96-5	
Manganese	0.740	mg/L	0.005	SW6020	09/09/13 15:01	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:08	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:06	CCM	7439-97-6	
Nickel, Dissolved	0.017	mg/L	0.005	SW6020	09/09/13 15:03	PER	7440-02-0	
Nickel	0.021	mg/L	0.005	SW6020	09/09/13 15:01	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:03	PER	7782-49-2	

Lab Sample ID: S57766.01 (continued)
Sample Tag: MW-13-31 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	0.007	mg/L	0.005	SW6020	09/09/13 15:01	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:03	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 15:01	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:03	PER	7440-62-2	
Vanadium	0.007	mg/L	0.005	SW6020	09/09/13 15:01	PER	7440-62-2	
Zinc, Dissolved	0.038	mg/L	0.005	SW6020	09/09/13 15:03	PER	7440-66-6	
Zinc	0.140	mg/L	0.005	SW6020	09/09/13 15:01	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 17:04	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	09/03/13 17:04	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	87-68-3	

Lab Sample ID: S57766.01 (continued)
Sample Tag: MW-13-31 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 17:04	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 17:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/29/13 16:43	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 16:43	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/29/13 16:43	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	110-82-7	

Lab Sample ID: S57766.01 (continued)
Sample Tag: MW-13-31 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 16:43	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/29/13 16:43	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/29/13 16:43	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 16:43	JGH	96-12-8	
Organics								
Methane in Water	310	ug/L	5.0	RSK-175	08/29/13 13:25	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57766.02
Sample Tag: Trip Blank (08222013)
Collected Date/Time: 08/22/2013 00:01
Matrix: Liquid
COC Reference: 75488

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 17:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 19:39	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 19:39	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 19:39	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 19:39	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 19:39	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	79-34-5	

Lab Sample ID: S57766.02 (continued)
Sample Tag: Trip Blank (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 19:39	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 19:39	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75488

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lance Rogers
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8837 P.O. NO.:
E-MAIL ADDRESS: Lance.Rogers@Arcadis-US.com QUOTE NO.:

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: B0064480.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Mike Kovacevich

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 1,4-Dioxane 8200 SIM	TCL SVOCs	TAL Metals - Total	TAL Metals - Dissolved	Dissolved Fe & Mn	Methane CO_2 Alkalinity/ Nitrate & Sulfate			
57766.01	8/22/13	1049	~~MW-31-13~~ MW-13-31 (08222013)	GW	12	3	6	3					X	X	X	X	X	X	X		
.02	8/22/13	—	TRIP BLANK (08222013)		1		1						X								

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
		8-22-13	13:30
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8/22/13	17:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8-22-13	19:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Mer		8-22-13	1400

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Mer	8/22/13	1435
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Tabitha Faust	8-22-13	1435

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308452	08/23/2013	S57766

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308452**
Project:	Subcontract Lab Services	Description:	S57766
Client Sample ID:	**57766.01**	Sampled:	08/22/13 10:49
Lab Sample ID:	**1308452-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/23/13 13:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**310**	5.0	ug/L	10	RSK-175	08/29/13 13:25	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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29-18

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308452
75473

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557766
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
-01	8/22 ~~8/23~~	1049	57766.01	GW	3		X						X	*Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Tabitha Faust ☐ Sampler	DATE 8/22/13	TIME 1600
RECEIVED BY: SIGNATURE/ORGANIZATION	12 466 477 03 5951 8050	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Trimatrix	DATE 8/23/13	TIME 1330
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 3.3
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit
Receipt Record Page/Line #
Work Order #: 1308452
New / Add To
Project Chemist | Sample #s

Recorded by (initials/date): JR 8/23/13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # Client Red Med. | Time 1414

Custody Seals:
- ☑ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location:
Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☑ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	2.8	-	2.8
2	4.3	-	4.3
3	2.9	-	2.9
Average °C			3.3

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # | Time

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location:
Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # | Time

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location:
Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # | Time

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location:
Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Initials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		☐	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☐	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☐ NONE RECEIVED
- ☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
		☑	Broken containers/lids?
		☑	Missing or incomplete labels?
		☑	Illegible information on labels?
		☑	Low volume received?
		☑	Inappropriate or non-TriMatrix containers received?
☐		☑	VOC vials / TOX containers have headspace?
☑		☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/23/13 1330	8/23/13 1425	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57767.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57767.01-S57767.03
Project: Plant 6 B0064481
Collected Date: 08/22/2013
Submitted Date/Time: 08/22/2013 14:35
Sampled by: Cliff Walls
P.O. #: B0064481

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified.Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57767.01	MWBP-12-UST 5-6	Groundwater	08/22/2013 09:45
S57767.02	MWBP-10-UST 5-6	Groundwater	08/22/2013 11:50
S57767.03	Trip Blank	Groundwater	08/22/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57767.01
Sample Tag: MWBP-12-UST 5-6
Collected Date/Time: 08/22/2013 09:45
Matrix: Groundwater
COC Reference: 75494

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
3	125ml Plastic	HNO3	Yes	5.5	IR
1	500ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:50	LBR		
Inorganics								
Alkalinity as CaCO3	352	mg/L	1	2320B	08/28/13 13:20	JDP		
Carbon Dioxide	210	mg/L	10	4500-CO2C	08/22/13 15:22	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 10:52	JDP	14797-55-8	
Sulfate	262	mg/L	20	E300.0	08/23/13 11:44	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:07	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 15:05	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020	09/09/13 15:07	PER	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020	09/09/13 15:05	PER	7440-38-2	
Barium, Dissolved	0.073	mg/L	0.005	SW6020	09/09/13 15:07	PER	7440-39-3	
Barium	0.074	mg/L	0.005	SW6020	09/09/13 15:05	PER	7440-39-3	
Boron, Dissolved	Not detected	mg/L	0.04	SW6020	09/09/13 15:07	PER	7440-42-8	
Boron	Not detected	mg/L	0.04	SW6020	09/09/13 15:05	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:07	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 15:05	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:07	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 15:05	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:07	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 15:05	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:07	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 15:05	PER	7440-50-8	
Iron, Dissolved	9.49	mg/L	0.02	E200.8	09/09/13 15:07	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 15:07	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 15:05	PER	7439-92-1	
Manganese, Dissolved	0.238	mg/L	0.005	SW6020	09/09/13 15:07	PER	7439-96-5	
Manganese	0.243	mg/L	0.005	SW6020	09/09/13 15:05	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:12	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:10	CCM	7439-97-6	
Nickel, Dissolved	0.018	mg/L	0.005	SW6020	09/09/13 15:07	PER	7440-02-0	
Nickel	0.019	mg/L	0.005	SW6020	09/09/13 15:05	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:07	PER	7782-49-2	

Lab Sample ID: S57767.01 (continued)
Sample Tag: MWBP-12-UST 5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 15:05	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:07	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 15:05	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:07	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 15:05	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:07	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020	09/09/13 15:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 17:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	09/03/13 17:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	09/03/13 17:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	87-68-3	

Lab Sample ID: S57767.01 (continued)
Sample Tag: MWBP-12-UST 5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 17:38	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	8	ug/L	5	SW8260B - SIM	08/23/13 18:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 19:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 19:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 19:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	110-82-7	

Lab Sample ID: S57767.01 (continued)
Sample Tag: MWBP-12-UST 5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 19:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 19:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 19:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 19:59	WAT	96-12-8	
Organics								
Methane in Water	16	ug/L	0.5	RSK-175	08/29/13 13:36	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57767.02
Sample Tag: MWBP-10-UST 5-6
Collected Date/Time: 08/22/2013 11:50
Matrix: Groundwater
COC Reference: 75494

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
2	125ml Plastic	HNO3	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:50	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:14	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 15:12	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/09/13 15:14	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/09/13 15:12	PER	7440-38-2	
Barium, Dissolved	0.255	mg/L	0.005	SW6020	09/09/13 15:14	PER	7440-39-3	
Barium	0.253	mg/L	0.005	SW6020	09/09/13 15:12	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	09/09/13 15:14	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	09/09/13 15:12	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:14	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 15:12	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:14	PER	7440-47-3	
Chromium	0.006	mg/L	0.005	SW6020	09/09/13 15:12	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:14	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 15:12	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:14	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 15:12	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 15:14	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 15:12	PER	7439-92-1	
Manganese, Dissolved	0.194	mg/L	0.005	SW6020	09/09/13 15:14	PER	7439-96-5	
Manganese	0.190	mg/L	0.005	SW6020	09/09/13 15:12	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:15	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:13	CCM	7439-97-6	
Nickel, Dissolved	0.017	mg/L	0.005	SW6020	09/09/13 15:14	PER	7440-02-0	
Nickel	0.019	mg/L	0.005	SW6020	09/09/13 15:12	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:14	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 15:12	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:14	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 15:12	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:14	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 15:12	PER	7440-62-2	
Zinc, Dissolved	0.005	mg/L	0.005	SW6020	09/09/13 15:14	PER	7440-66-6	
Zinc	0.005	mg/L	0.005	SW6020	09/09/13 15:12	PER	7440-66-6	

Lab Sample ID: S57767.02 (continued)
Sample Tag: MWBP-10-UST 5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 18:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	09/03/13 18:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	88-75-5	

Lab Sample ID: S57767.02 (continued)
Sample Tag: MWBP-10-UST 5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 18:12	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 18:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 20:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 20:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	2	ug/L	1	SW8260B	08/27/13 20:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 20:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 20:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 20:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	108-87-2	

Lab Sample ID: S57767.02 (continued)
Sample Tag: MWBP-10-UST 5-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 20:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:19	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57767.03
Sample Tag: Trip Blank
Collected Date/Time: 08/22/2013 07:00
Matrix: Groundwater
COC Reference: 75494

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 18:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 20:40	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 20:40	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 20:40	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 20:40	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 20:40	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	79-34-5	

Lab Sample ID: S57767.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 20:40	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:40	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75494

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Carrie Rogers
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Carrie.Rogers@arcadis.us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 6 Book 4481
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Lynn Collins

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1-4 SIM	TCL SVOC	TAL METAL	Diss TAL Metals	Diss Fe + Mn	Alk, Sol, Nit, Cl, SO4	Methane			
57767.01	8-22-13	9:45	MWBP-12-UST 5-6	GW	12	3	6	3					x	x	x	x	x	x	x			
.02	8-22-13	11:50	MWBP-10-UST 5-6	GW	7	2	3	2					x	x	x	x						
.03	8-22-13	7:00	Trip Blank	GW	1	1							x									

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☐ Sampler DATE 8-22-13 TIME 17:00
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 8-22-13 TIME 19:00

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE 8-22-13 TIME 1700
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 8-22-13 TIME 1400

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 8-22-13 TIME 1400

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE 8-22-13 TIME 1700
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 8-22-13 TIME 1485

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308453	08/23/2013	S57767

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308453**
Project:	Subcontract Lab Services	Description:	S57767
Client Sample ID:	**57767.01**	Sampled:	08/22/13 09:45
Lab Sample ID:	**1308453-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/23/13 13:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**16**	0.50	ug/L	1	RSK-175	08/29/13 13:36	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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29-19

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1388453 75474

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: S 57767
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
-01	8/22	945	57767.01	GW	3		X						X	* Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/22/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 595 1 8050 DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Trimatrix DATE: 8/23/13 TIME: 1330
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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Individual sample results relate only to the sample tested.

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit
Receipt Record Page/Line #
Work Order #: 1308453
New / Add To
Project Chemist | Sample #s

Recorded by (initials/date): JR 8/23/13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # Client Red Med. | Time 1414

Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	2.8	-	2.8
2	4.3	-	4.3
3	2.9	-	2.9
Average °C			3.3

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Initials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		☐	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/23/13 1330	8/23/13 1425	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

Analytical Laboratory Report

Report ID: S57768.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57768.01-S57768.02
Project: RACER Lansing/ Plant 3
Collected Date: 08/22/2013
Submitted Date/Time: 08/22/2013 14:35
Sampled by: Billy J. Coben
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57768.01	MW-23 (08222013)	Groundwater	08/22/2013 10:10
S57768.02	Trip Blank (08222013)	Liquid	08/22/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57768.01
Sample Tag: MW-23 (08222013)
Collected Date/Time: 08/22/2013 10:10
Matrix: Groundwater
COC Reference: 75368

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
3	125ml Plastic	HNO3	Yes	5.5	IR
1	500ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:50	LBR		
Inorganics								
Alkalinity as CaCO3	356	mg/L	1	2320B	08/28/13 13:24	JDP		
Carbon Dioxide	152	mg/L	10	4500-CO2C	08/22/13 15:24	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 11:04	JDP	14797-55-8	
Sulfate	199	mg/L	10	E300.0	08/23/13 11:04	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:17	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 15:15	PER	7440-36-0	
Arsenic, Dissolved	0.006	mg/L	0.002	SW6020	09/09/13 15:17	PER	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020	09/09/13 15:15	PER	7440-38-2	
Barium, Dissolved	0.083	mg/L	0.005	SW6020	09/09/13 15:17	PER	7440-39-3	
Barium	0.093	mg/L	0.005	SW6020	09/09/13 15:15	PER	7440-39-3	
Boron, Dissolved	Not detected	mg/L	0.04	SW6020	09/09/13 15:17	PER	7440-42-8	
Boron	Not detected	mg/L	0.04	SW6020	09/09/13 15:15	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:17	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 15:15	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:17	PER	7440-47-3	
Chromium	0.010	mg/L	0.005	SW6020	09/09/13 15:15	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:17	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 15:15	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:17	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 15:15	PER	7440-50-8	
Iron, Dissolved	3.14	mg/L	0.02	E200.8	09/09/13 15:17	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 15:17	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 15:15	PER	7439-92-1	
Manganese, Dissolved	0.062	mg/L	0.005	SW6020	09/09/13 15:17	PER	7439-96-5	
Manganese	0.074	mg/L	0.005	SW6020	09/09/13 15:15	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:19	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:17	CCM	7439-97-6	
Nickel, Dissolved	0.013	mg/L	0.005	SW6020	09/09/13 15:17	PER	7440-02-0	
Nickel	0.023	mg/L	0.005	SW6020	09/09/13 15:15	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:17	PER	7782-49-2	

Lab Sample ID: S57768.01 (continued)
Sample Tag: MW-23 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 15:15	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:17	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 15:15	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:17	PER	7440-62-2	
Vanadium	0.008	mg/L	0.005	SW6020	09/09/13 15:15	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:17	PER	7440-66-6	
Zinc	0.008	mg/L	0.005	SW6020	09/09/13 15:15	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 18:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/03/13 18:46	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	86-73-7	

B-Compound also found in associated method blank

Lab Sample ID: S57768.01 (continued)
Sample Tag: MW-23 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 18:46	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 18:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 21:00	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 21:00	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 21:00	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	71-55-6	

Lab Sample ID: S57768.01 (continued)
Sample Tag: MW-23 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 21:00	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 21:00	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 21:00	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 21:00	WAT	96-12-8	
Organics								
Methane in Water	2.6	ug/L	0.5	RSK-175	08/29/13 13:40	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57768.02
Sample Tag: Trip Blank (08222013)
Collected Date/Time: 08/22/2013 00:01
Matrix: Liquid
COC Reference: 75368

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 19:14	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	76-13-1	
Acetone	11	ug/L	10	SW8260B	08/27/13 21:20	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 21:20	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 21:20	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 21:20	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 21:20	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	79-34-5	

Lab Sample ID: S57768.02 (continued)
Sample Tag: Trip Blank (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 21:20	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 21:20	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75368

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DR. SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8637 P.O. NO.: B00644480.2013 QUOTE NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

ANALYSIS REQUESTED (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME: RACER LANSING / RAM-3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COOK

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SO=SOLID A=AIR W=WASTE SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers Preserved: NONE	HCl	HNO3	H2SO4	NaOH	ZnAc	MeOH	TCL VOC 14-D 524.2	TCL SVOC	TAL METALS	DISSOLVED Fe, Mn	SULFATE, NITRATE, CHLORIDE, ALKALINITY	METHANE	TAL DISSOLVED METALS			
577681.01	8/22/13	10:10	MW-23 (08222013)	GW	12	3	6	3					3	2	1	1	1	3	1			
.02	—	—	TRIP BLANK (08222013)	L	2		2						2									

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
ARCADIS (Sampler)	8-22-13	12:20
RECEIVED BY: SIGNATURE/ORGANIZATION	8-22-13	13:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION	8-22-13	19:00
RECEIVED BY: SIGNATURE/ORGANIZATION	8-22-13	1400

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
MSD	8-22-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Tabitha Faust	8-22-13	1425

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308454	08/23/2013	S57768

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308454**
Project:	Subcontract Lab Services	Description:	S57768
Client Sample ID:	**57768.01**	Sampled:	08/22/13 10:10
Lab Sample ID:	**1308454-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/23/13 13:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**2.6**	0.50	ug/L	1	RSK-175	08/29/13 13:40	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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29-20

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308454
75475

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: S 57768
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
-01	8/22	1010	57768.01	GW	3		X						X	*Subject to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/22/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: UPS 1Z466477030595180 50 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Trimatrix DATE: 8/23/13 TIME: 1330

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit
Receipt Record Page/Line #
New / Add To
Work Order #: 1308454
Project Chemist
Sample #s

Recorded by (initials/date): JR 8/23/13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)

☐ See Additional Cooler Information Form

Cooler # Client Red Med. — Time 1414

Custody Seals:
- ☑ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location: (Dispersed) / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☑ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	2.8	-	2.8
2	4.3	-	4.3
3	2.9	-	2.9
Average °C			3.3

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑	☐	Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Intials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		☐	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☐ NONE RECEIVED
- ☑ RECEIVED, COCs TO LAB(S)

Notes

- ☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/23/13 1330	8/23/13 1425	(Yes) / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57778.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57778.01-S57778.02
Project: Plant 6/B0064481.2013
Collected Date: 08/22/2013
Submitted Date/Time: 08/22/2013 14:35
Sampled by: Steve Stelter
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57778.01	MW-02-03 (6)	Groundwater	08/22/2013 11:00
S57778.02	Trip Blank	Groundwater	08/22/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57778.01
Sample Tag: MW-02-03 (6)
Collected Date/Time: 08/22/2013 11:00
Matrix: Groundwater
COC Reference: 75449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.5	IR
2	1L Amber	None	Yes	5.5	IR
3	125ml Plastic	HNO3	Yes	5.5	IR
1	500ml Plastic	None	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Inorganics								
Alkalinity as CaCO3	308	mg/L	1	2320B	08/28/13 13:26	JDP		
Carbon Dioxide	250	mg/L	10	4500-CO2C	08/22/13 15:26	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 11:15	JDP	14797-55-8	
Sulfate	65	mg/L	5	E300.0	08/23/13 11:15	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:45	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 15:53	PER	7440-36-0	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020	09/09/13 15:45	PER	7440-38-2	
Arsenic	0.015	mg/L	0.002	SW6020	09/09/13 15:53	PER	7440-38-2	
Barium, Dissolved	1.21	mg/L	0.005	SW6020	09/09/13 15:45	PER	7440-39-3	
Barium	1.25	mg/L	0.005	SW6020	09/09/13 15:53	PER	7440-39-3	
Boron, Dissolved	0.08	mg/L	0.04	SW6020	09/09/13 15:45	PER	7440-42-8	
Boron	0.09	mg/L	0.04	SW6020	09/09/13 15:53	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:45	PER	7440-43-9	
Cadmium	0.0013	mg/L	0.0005	SW6020	09/09/13 15:53	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:45	PER	7440-47-3	
Chromium	0.020	mg/L	0.005	SW6020	09/09/13 15:53	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:45	PER	7440-48-4	
Cobalt	0.005	mg/L	0.005	SW6020	09/09/13 15:53	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:45	PER	7440-50-8	
Copper	0.010	mg/L	0.005	SW6020	09/09/13 15:53	PER	7440-50-8	
Iron, Dissolved	6.54	mg/L	0.02	E200.8	09/09/13 15:45	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 15:45	PER	7439-92-1	
Lead	0.005	mg/L	0.003	SW6020	09/09/13 15:53	PER	7439-92-1	
Manganese, Dissolved	0.221	mg/L	0.005	SW6020	09/09/13 15:45	PER	7439-96-5	
Manganese	0.279	mg/L	0.005	SW6020	09/09/13 15:53	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:33	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:31	CCM	7439-97-6	
Nickel, Dissolved	0.071	mg/L	0.005	SW6020	09/09/13 15:45	PER	7440-02-0	
Nickel	0.075	mg/L	0.005	SW6020	09/09/13 15:53	PER	7440-02-0	
Selenium, Dissolved	0.006	mg/L	0.005	SW6020	09/09/13 15:45	PER	7782-49-2	

Lab Sample ID: S57778.01 (continued)
Sample Tag: MW-02-03 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	0.007	mg/L	0.005	SW6020	09/09/13 15:53	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:45	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 15:53	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:45	PER	7440-62-2	
Vanadium	0.008	mg/L	0.005	SW6020	09/09/13 15:53	PER	7440-62-2	
Zinc, Dissolved	0.028	mg/L	0.005	SW6020	09/09/13 15:45	PER	7440-66-6	
Zinc	0.051	mg/L	0.005	SW6020	09/09/13 15:53	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 19:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	09/03/13 19:20	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	86-73-7	

B-Compound also found in associated method blank

Lab Sample ID: S57778.01 (continued)
Sample Tag: MW-02-03 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	98-95-3	
di-n-Octyl phthalate	1	ug/L	1	SW8270C	09/03/13 19:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 19:20	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	17	ug/L	5	SW8260B - SIM	08/28/13 16:32	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	76-13-1	
Acetone	16	ug/L	10	SW8260B	08/27/13 16:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 16:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 16:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	74-87-3	
Vinyl chloride	1	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	71-55-6	

Lab Sample ID: S57778.01 (continued)
Sample Tag: MW-02-03 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 16:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 16:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 16:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 16:53	WAT	96-12-8	
Organics								
Methane in Water	410	ug/L	10	RSK-175	08/29/13 13:52	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57778.02
Sample Tag: Trip Blank
Collected Date/Time: 08/22/2013 07:00
Matrix: Groundwater
COC Reference: 75449

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 17:19	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 17:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 17:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 17:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 17:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 17:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	79-34-5	

Lab Sample ID: S57778.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 17:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:14	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75449

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE Rogers
COMPANY: ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Lance.Rogers@Arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 6 / B0064481.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Steve Stelma

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER
577781.01	8/22	1100	MW-02-03(6)	GW								
.02	8-22	7:00	Trip Blank	GW	1		1					

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

TCL VOC's 1,4-D Sims
TAL Metals
SVOC's
Sulfate, Nitrate, 602
Dissolved Manganese
Methane, Alkalinity

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Steve Stelma PMI (Sampler)		8/22/13	1350
RECEIVED BY: SIGNATURE/ORGANIZATION	Cliff Wells	8/22/13	1350
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		8-23-13	1350

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Tulsata Faust	8/22/13 1435

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308455	08/23/2013	S57778

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308455**
Project:	Subcontract Lab Services	Description:	S57778
Client Sample ID:	**57778.01**	Sampled:	08/22/13 11:00
Lab Sample ID:	**1308455-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/23/13 13:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**410**	10	ug/L	20	RSK-175	08/29/13 13:52	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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29-21

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308455
75476

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: S 57778
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
-01	8/22	1100	57778.01	GW	3		X						X	* Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/22/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: FZ 466 477 03 5951 8050 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Trimatrix DATE: 8/23/13 TIME: 1330

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES
5560 Corporate Exchange Court SE ◆ Grand Rapids, MI 49512 ◆ 616.975.4500 ◆ Fax 616.942.7463 ◆ www.trimatrixlabs.com

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit
Receipt Record Page/Line #
Work Order #: 1308455
New / Add To
Project Chemist
Sample #s

Recorded by (initials/date): JR 8/23/13

Cooler ☑ Box ☐ Other ☐ — Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # Client Red Med.	Time 1414	Cooler #	Time	Cooler #	Time	Cooler #	Time
Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact		Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact		Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact		Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	
Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom		Coolant Location: Dispersed / Top / Middle / Bottom	
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers		Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers		Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers		Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container		Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container		Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container		Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	
Recorded °C / Correction Factor °C / Actual °C		Recorded °C / Correction Factor °C / Actual °C		Recorded °C / Correction Factor °C / Actual °C		Recorded °C / Correction Factor °C / Actual °C	
Temp Blank:		Temp Blank:		Temp Blank:		Temp Blank:	
TB location: Representative / Not Representative		TB location: Representative / Not Representative		TB location: Representative / Not Representative		TB location: Representative / Not Representative	
1 2.8 - 2.8		1		1		1	
2 4.3 - 4.3		2		2		2	
3 2.9 - 2.9		3		3		3	
Average °C 3.3		Average °C		Average °C		Average °C	
☐ Cooler ID on COC?		☐ Cooler ID on COC?		☐ Cooler ID on COC?		☐ Cooler ID on COC?	
☐ VOC Trip Blank received?		☐ VOC Trip Blank received?		☐ VOC Trip Blank received?		☐ VOC Trip Blank received?	

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Intials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		☐	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/23/13 1330	8/23/13 1425	Yes / No

Log In Forms - Receiving Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57781.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57781.01-S57781.03
Project: RACER Lansing Plant 3
Collected Date: 08/22/2013
Submitted Date/Time: 08/23/2013 09:45
Sampled by: Billy J. Coben
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57781.01	MW-05(3) (08222013)	Groundwater	08/22/2013 13:40
S57781.02	MW-19 (08222013)	Groundwater	08/22/2013 16:00
S57781.03	Trip Blank (08222013)	Liquid	08/22/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57781.01
Sample Tag: MW-05(3) (08222013)
Collected Date/Time: 08/22/2013 13:40
Matrix: Groundwater
COC Reference: 75452

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 15:55	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/09/13 15:55	PER	7440-38-2	
Barium	0.113	mg/L	0.005	SW6020	09/09/13 15:55	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	09/09/13 15:55	PER	7440-42-8	
Cadmium	0.0027	mg/L	0.0005	SW6020	09/09/13 15:55	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 15:55	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 15:55	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 15:55	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 15:55	PER	7439-92-1	
Manganese	0.013	mg/L	0.005	SW6020	09/09/13 15:55	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:35	CCM	7439-97-6	
Nickel	0.027	mg/L	0.005	SW6020	09/09/13 15:55	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 15:55	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 15:55	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 15:55	PER	7440-62-2	
Zinc	0.041	mg/L	0.005	SW6020	09/09/13 15:55	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	91-58-7	

Lab Sample ID: S57781.01 (continued)
Sample Tag: MW-05(3) (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 19:55	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	09/03/13 19:55	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 19:55	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S57781.01 (continued)
Sample Tag: MW-05(3) (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 19:32	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 17:35	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 17:35	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 17:35	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 17:35	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 17:35	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 17:35	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	120-82-1	

Lab Sample ID: S57781.01 (continued)
Sample Tag: MW-05(3) (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:35	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57781.02
Sample Tag: MW-19 (08222013)
Collected Date/Time: 08/22/2013 16:00
Matrix: Groundwater
COC Reference: 75452

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
Metal Digestion	Completed			3015A	09/09/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	08/23/13 14:11	MJC	18540-29-9	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:58	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 15:57	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/09/13 15:58	PER	7440-38-2	
Arsenic	0.004	mg/L	0.002	SW6020	09/09/13 15:57	PER	7440-38-2	
Barium, Dissolved	0.091	mg/L	0.005	SW6020	09/09/13 15:58	PER	7440-39-3	
Barium	0.136	mg/L	0.005	SW6020	09/09/13 15:57	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	09/09/13 15:58	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	09/09/13 15:57	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:58	PER	7440-43-9	
Cadmium	0.0014	mg/L	0.0005	SW6020	09/09/13 15:57	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:58	PER	7440-47-3	
Chromium	0.128	mg/L	0.005	SW6020	09/09/13 15:57	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:58	PER	7440-48-4	
Cobalt	0.010	mg/L	0.005	SW6020	09/09/13 15:57	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:58	PER	7440-50-8	
Copper	0.053	mg/L	0.005	SW6020	09/09/13 15:57	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 15:58	PER	7439-92-1	
Lead	0.029	mg/L	0.003	SW6020	09/09/13 15:57	PER	7439-92-1	
Manganese, Dissolved	0.154	mg/L	0.005	SW6020	09/09/13 15:58	PER	7439-96-5	
Manganese	0.264	mg/L	0.005	SW6020	09/09/13 15:57	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:39	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:37	CCM	7439-97-6	
Nickel, Dissolved	0.026	mg/L	0.005	SW6020	09/09/13 15:58	PER	7440-02-0	
Nickel	0.079	mg/L	0.005	SW6020	09/09/13 15:57	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:58	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 15:57	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 15:58	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 15:57	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 15:58	PER	7440-62-2	

Lab Sample ID: S57781.02 (continued)
Sample Tag: MW-19 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Vanadium	0.012	mg/L	0.005	SW6020	09/09/13 15:57	PER	7440-62-2	
Zinc, Dissolved	0.052	mg/L	0.005	SW6020	09/09/13 15:58	PER	7440-66-6	
Zinc	0.307	mg/L	0.005	SW6020	09/09/13 15:57	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 20:29	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	84-66-2	
Dimethyl phthalate	21	ug/L	1	SW8270C	09/03/13 20:29	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	4	ug/L	1	SW8270C	09/03/13 20:29	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	193-39-5	

B-Compound also found in associated method blank

Lab Sample ID: S57781.02 (continued)
Sample Tag: MW-19 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 20:29	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 19:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 17:56	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 17:56	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 17:56	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 17:56	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 17:56	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	56-23-5	

Lab Sample ID: S57781.02 (continued)
Sample Tag: MW-19 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 17:56	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:56	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57781.03
Sample Tag: Trip Blank (08222013)
Collected Date/Time: 08/22/2013 00:01
Matrix: Liquid
COC Reference: 75452

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 20:08	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 18:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 18:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 18:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 18:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 18:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	79-34-5	

Lab Sample ID: S57781.03 (continued)
Sample Tag: Trip Blank (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 18:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 18:17	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75452

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ANCHOR
ADDRESS: 10559 CITATION DR. SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8837 P.O. NO.: B00644480.2013
E-MAIL ADDRESS: LANCE.ROGERS@ANCHORQEA.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING PLANT-3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. CORSON

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC + 1,4D + 1,4D SIMS	TCL SVOC	TAL METALS	TAL METALS DISSOLVED	HEXAVALENT CHROMIUM
577811.01	8/22/13	13:40	MW-05(3) (08222013)	GW	6	2	3	1					3	2	1		
.02	8/22/13	16:00	MW-19 (08222013)	GW	8	3	3	2					3	2	1	1	1
.03	—	—	TRIP BLANK (08222013)	L	1		1						1				

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	ANCHOR ☒ Sampler	8-22-13	17:20
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	FE	8/22/13	1720
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	FMS	8/22/13	1731
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
	Pam Stonerage	8/22/13	1731
		8-23-13	945

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	8-23-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Tabatha Feucht	8-23-13	945

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 0.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57782.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57782.01-S57782.03
Project: B0064480.2013
Collected Date: 08/22/2013
Submitted Date/Time: 08/23/2013 09:45
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified.Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57782.01	MW-91-2 (08222013)	Groundwater	08/22/2013 14:12
S57782.02	CH-14-RO (08222013)	Groundwater	08/22/2013 15:38
S57782.03	Trip Blank (08222013)	Liquid	08/22/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57782.01
Sample Tag: MW-91-2 (08222013)
Collected Date/Time: 08/22/2013 14:12
Matrix: Groundwater
COC Reference: 75490

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Alkalinity as CaCO3	338	mg/L	1	2320B	08/28/13 13:28	JDP		
Carbon Dioxide	127	mg/L	10	4500-CO2C	08/23/13 13:06	JDP	124-38-9	
Chromium VI	Not detected	mg/L	0.01	3500-Cr B	08/23/13 13:59	MJC	18540-29-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 12:42	JDP	14797-55-8	
Sulfate	190	mg/L	10	E300.0	08/23/13 12:42	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 16:53	PER	7440-36-0	
Arsenic	0.004	mg/L	0.002	SW6020	09/09/13 16:53	PER	7440-38-2	
Barium	0.117	mg/L	0.005	SW6020	09/09/13 16:53	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	09/09/13 16:53	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 16:53	PER	7440-43-9	
Chromium	0.098	mg/L	0.005	SW6020	09/09/13 16:53	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 16:53	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 16:53	PER	7440-50-8	
Iron, Dissolved	2.78	mg/L	0.02	E200.8	09/09/13 17:01	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 16:53	PER	7439-92-1	
Manganese, Dissolved	0.048	mg/L	0.005	E200.8	09/09/13 17:01	PER	7439-96-5	
Manganese	0.049	mg/L	0.005	SW6020	09/09/13 16:53	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:41	CCM	7439-97-6	
Nickel	0.015	mg/L	0.005	SW6020	09/09/13 16:53	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 16:53	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 16:53	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 16:53	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/09/13 16:53	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	120-12-7	

Lab Sample ID: S57782.01 (continued)
Sample Tag: MW-91-2 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 21:03	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/03/13 21:03	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	100-02-7	

B-Compound also found in associated method blank

Lab Sample ID: S57782.01 (continued)
Sample Tag: MW-91-2 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 21:03	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 20:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 18:38	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 18:38	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 18:38	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 18:38	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 18:38	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	10061-02-6	

Lab Sample ID: S57782.01 (continued)
Sample Tag: MW-91-2 (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 18:38	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 18:38	WAT	96-12-8	
Organics								
Methane in Water	1.8	ug/L	0.5	RSK-175	08/30/13 11:00	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57782.02
Sample Tag: CH-14-RO (08222013)
Collected Date/Time: 08/22/2013 15:38
Matrix: Groundwater
COC Reference: 75490

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR
1	125ml Plastic	None	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Alkalinity as CaCO3	377	mg/L	1	2320B	08/28/13 13:30	JDP		
Carbon Dioxide	251	mg/L	10	4500-CO2C	08/23/13 13:12	JDP	124-38-9	
Chromium VI	21.1	mg/L	0.3	3500-Cr B	08/23/13 13:46	MJC	18540-29-9	
Nitrate-N	27.0	mg/L	0.5	E300.0	08/23/13 12:53	JDP	14797-55-8	
Sulfate	224	mg/L	10	E300.0	08/23/13 12:53	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 17:05	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/09/13 17:05	PER	7440-38-2	
Barium	0.047	mg/L	0.005	SW6020	09/09/13 17:05	PER	7440-39-3	
Boron	0.13	mg/L	0.04	SW6020	09/09/13 17:05	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 17:05	PER	7440-43-9	
Chromium	21.1	mg/L	0.005	SW6020	09/09/13 17:05	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 17:05	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 17:05	PER	7440-50-8	
Iron, Dissolved	0.93	mg/L	0.02	E200.8	09/09/13 17:07	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 17:05	PER	7439-92-1	
Manganese, Dissolved	0.006	mg/L	0.005	E200.8	09/09/13 17:07	PER	7439-96-5	
Manganese	0.007	mg/L	0.005	SW6020	09/09/13 17:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:43	CCM	7439-97-6	
Nickel	0.057	mg/L	0.005	SW6020	09/09/13 17:05	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 17:05	PER	7782-49-2	
Silver	0.0012	mg/L	0.0005	SW6020	09/09/13 17:05	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 17:05	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/09/13 17:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	120-12-7	

Lab Sample ID: S57782.02 (continued)
Sample Tag: CH-14-RO (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 21:37	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	09/03/13 21:37	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	100-02-7	

B-Compound also found in associated method blank

Lab Sample ID: S57782.02 (continued)
Sample Tag: CH-14-RO (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 21:37	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 21:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 18:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 18:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 18:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 18:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 18:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	10061-02-6	

Lab Sample ID: S57782.02 (continued)
Sample Tag: CH-14-RO (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 18:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 18:59	WAT	96-12-8	
Organics								
Methane in Water	Not detected	ug/L	0.5	RSK-175	08/30/13 11:26	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57782.03
Sample Tag: Trip Blank (08222013)
Collected Date/Time: 08/22/2013 00:01
Matrix: Liquid
COC Reference: 75490

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 20:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 19:20	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 19:20	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 19:20	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 19:20	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 19:20	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	79-34-5	

Lab Sample ID: S57782.03 (continued)
Sample Tag: Trip Blank (08222013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 19:20	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 19:20	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75490

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DR
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 0837
E-MAIL ADDRESS: BOOG4480.2013
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME:
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MIKE KONIECZNY

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TIC VOCs 1,4-DIOXANE 8260 SIM	TCL SVOCs	TAL METALS	DISSOLVED FE & MN	HEXAVALENT CHROMIUM	METHANE	CO_2, ALKALINITY, SULFATE, NITRATE			
57782.01	8/22/13	1412	MW-91-2 (08222013)	GW	12	4	6	2					X	X	X	X	X	X	X			
.02	8/22/13	1538	CH-14-RD (08222013)	GW	12	4	6	2					X	X	X	X	X	X	X			
.03	8/22/13		TRIP BLANK (08222013)		1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☑ Sampler	DATE 8/22/13	TIME 1707	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE 8/22/13	TIME 1707	
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE 8/22/13	TIME 1731	
RECEIVED BY: SIGNATURE/ORGANIZATION DM Storage	DATE 8/22/13	TIME 1731	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE 8.23.13	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION Tabitha Faust	DATE 8-23-13	TIME 945	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 5.1
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308507	08/28/2013	S57782

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

This report shall not be reproduced, except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308507**
Project:	Subcontract Lab Services	Description:	S57782
Client Sample ID:	**57782.01**	Sampled:	08/22/13 14:12
Lab Sample ID:	**1308507-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**1.8**	0.50	ug/L	1	RSK-175	08/30/13 11:00	JMF	1309152

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308507**
Project:	Subcontract Lab Services	Description:	S57782
Client Sample ID:	**57782.02**	Sampled:	08/22/13 15:38
Lab Sample ID:	**1308507-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	<0.50	0.50	ug/L	1	RSK-175	08/30/13 11:26	JMF	1309152

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL	
QC Batch: 1309152 Method-Specific Extraction/RSK-175									
Method Blank					Analyzed:		08/30/2013		By: JMF
Unit: ug/L					Analytical Batch:		3I03042		
Methane			<0.50			--		0.50	
Laboratory Control Sample					Analyzed:		08/30/2013		By: JMF
Unit: ug/L					Analytical Batch:		3I03042		
Methane		33.0	**26.8**	81	70-116	--		0.50	
Matrix Spike 1308507-01 57782.01					Analyzed:		08/30/2013		By: JMF
Unit: ug/L					Analytical Batch:		3I03042		
Methane	1.76	33.0	**26.1**	74	42-112	--		0.50	
Matrix Spike Duplicate 1308507-01 57782.01					Analyzed:		08/30/2013		By: JMF
Unit: ug/L					Analytical Batch:		3I03042		
Methane	1.76	33.0	**24.5**	69	42-112	7	20	0.50	

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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Cater-Client/Amygreen

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com WO# 1308507

C.O.C. PAGE # _____ OF _____

37-17
75480

Rack#477W

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 57782.01 SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/22	1412	57782.01	GW	3		X						X	
02	8/22	1536	5778202											*Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/27/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5972 9877 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Rachel Charles / TriMatrix DATE: 8/28/13 TIME: 1205

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308507
Receipt Record Page/Line #: 37-17 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): SMS 8/28/13

☑ Cooler ☐ Box ☐ Other _____ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
Client/Army/Green 1405			
Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C
Temp Blank:	Temp Blank:	Temp Blank:	Temp Blank:
TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative
1 5.2 — 5.2	1	1	1
2 5.6 — 5.6	2	2	2
3 4.9 — 4.9	3	3	3
Average °C: 5.2	Average °C	Average °C	Average °C
☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?
☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 75480

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Initials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/28/13 1205	8/28/13 1430	Yes / (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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Analytical Laboratory Report

Report ID: S57783.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57783.01-S57783.04
Project: Plant 6
Collected Date: 08/22/2013
Submitted Date/Time: 08/23/2013 09:45
Sampled by: SS
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified.Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57783.01	MW-03-08 (082213)	Groundwater	08/22/2013 13:50
S57783.02	MW-03-07 (082213)	Groundwater	08/22/2013 16:35
S57783.03	Dup #7	Groundwater	08/22/2013 00:01
S57783.04	Trip Blank	Liquid	08/22/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57783.01
Sample Tag: MW-03-08 (082213)
Collected Date/Time: 08/22/2013 13:50
Matrix: Groundwater
COC Reference: 75444

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
4	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
3	125ml Plastic	HNO3	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Alkalinity as CaCO3	112	mg/L	1	2320B	08/29/13 10:08	JDP		
Carbon Dioxide	65	mg/L	10	4500-CO2C	08/23/13 13:14	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 13:05	JDP	14797-55-8	
Sulfate	33	mg/L	5	E300.0	08/23/13 13:05	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:13	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 17:11	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/09/13 17:13	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/09/13 17:11	PER	7440-38-2	
Barium, Dissolved	0.114	mg/L	0.005	SW6020	09/09/13 17:13	PER	7440-39-3	
Barium	0.116	mg/L	0.005	SW6020	09/09/13 17:11	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020	09/09/13 17:13	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020	09/09/13 17:11	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 17:13	PER	7440-43-9	
Cadmium	0.0012	mg/L	0.0005	SW6020	09/09/13 17:11	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:13	PER	7440-47-3	
Chromium	0.007	mg/L	0.005	SW6020	09/09/13 17:11	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:13	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 17:11	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:13	PER	7440-50-8	
Copper	0.018	mg/L	0.005	SW6020	09/09/13 17:11	PER	7440-50-8	
Iron, Dissolved	0.23	mg/L	0.02	E200.8	09/09/13 17:13	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 17:13	PER	7439-92-1	
Lead	0.004	mg/L	0.003	SW6020	09/09/13 17:11	PER	7439-92-1	
Manganese, Dissolved	0.024	mg/L	0.005	SW6020	09/09/13 17:13	PER	7439-96-5	
Manganese	0.030	mg/L	0.005	SW6020	09/09/13 17:11	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:47	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:45	CCM	7439-97-6	
Nickel, Dissolved	0.007	mg/L	0.005	SW6020	09/09/13 17:13	PER	7440-02-0	
Nickel	0.011	mg/L	0.005	SW6020	09/09/13 17:11	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:13	PER	7782-49-2	

Lab Sample ID: S57783.01 (continued)
Sample Tag: MW-03-08 (082213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 17:11	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 17:13	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 17:11	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:13	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 17:11	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:13	PER	7440-66-6	
Zinc	0.037	mg/L	0.005	SW6020	09/09/13 17:11	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 22:11	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	09/03/13 22:11	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	86-73-7	

B-Compound also found in associated method blank

Lab Sample ID: S57783.01 (continued)
Sample Tag: MW-03-08 (082213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 22:11	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 17:37	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 19:41	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 19:41	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 19:41	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	71-55-6	

Lab Sample ID: S57783.01 (continued)
Sample Tag: MW-03-08 (082213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 19:41	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 19:41	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 19:41	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 19:41	WAT	96-12-8	
Organics								
Methane in Water	13	ug/L	0.5	RSK-175	08/30/13 10:48	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57783.02
Sample Tag: MW-03-07 (082213)
Collected Date/Time: 08/22/2013 16:35
Matrix: Groundwater
COC Reference: 75444

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/26/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Alkalinity as CaCO3	318	mg/L	1	2320B	08/29/13 10:12	JDP		
Carbon Dioxide	114	mg/L	10	4500-CO2C	08/23/13 13:16	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 13:16	JDP	14797-55-8	
Sulfate	62	mg/L	5	E300.0	08/23/13 13:16	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 17:15	PER	7440-36-0	
Arsenic	0.013	mg/L	0.002	SW6020	09/09/13 17:15	PER	7440-38-2	
Barium	0.238	mg/L	0.005	SW6020	09/09/13 17:15	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	09/09/13 17:15	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 17:15	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 17:15	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 17:15	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 17:15	PER	7440-50-8	
Iron, Dissolved	2.50	mg/L	0.02	E200.8	09/09/13 17:17	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 17:15	PER	7439-92-1	
Manganese, Dissolved	0.075	mg/L	0.005	E200.8	09/09/13 17:17	PER	7439-96-5	
Manganese	0.074	mg/L	0.005	SW6020	09/09/13 17:15	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/26/13 15:49	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020	09/09/13 17:15	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 17:15	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 17:15	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 17:15	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/09/13 17:15	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	92-52-4	

Lab Sample ID: S57783.02 (continued)
Sample Tag: MW-03-07 (082213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 22:45	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/03/13 22:45	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	86-30-6	

B-Compound also found in associated method blank

Lab Sample ID: S57783.02 (continued)
Sample Tag: MW-03-07 (082213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 22:45	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	28	ug/L	5	SW8260B - SIM	08/26/13 17:55	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 20:02	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 20:02	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 20:02	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 20:02	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 20:02	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	127-18-4	

Lab Sample ID: S57783.02 (continued)
Sample Tag: MW-03-07 (082213)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 20:02	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:02	WAT	96-12-8	
Organics								
Methane in Water	51	ug/L	0.5	RSK-175	08/30/13 10:52	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57783.03
Sample Tag: Dup #7
Collected Date/Time: 08/22/2013 00:01
Matrix: Groundwater
COC Reference: 75444

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR
3	125ml Plastic	HNO3	Yes	5.1	IR
1	500ml Plastic	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Alkalinity as CaCO3	124	mg/L	1	2320B	08/29/13 10:14	JDP		
Carbon Dioxide	59	mg/L	10	4500-CO2C	08/23/13 13:18	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 13:28	JDP	14797-55-8	
Sulfate	30	mg/L	5	E300.0	08/23/13 13:28	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:21	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 17:19	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/09/13 17:21	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/09/13 17:19	PER	7440-38-2	
Barium, Dissolved	0.115	mg/L	0.005	SW6020	09/09/13 17:21	PER	7440-39-3	
Barium	0.119	mg/L	0.005	SW6020	09/09/13 17:19	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	09/09/13 17:21	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020	09/09/13 17:19	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 17:21	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 17:19	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:21	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 17:19	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:21	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 17:19	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:21	PER	7440-50-8	
Copper	0.006	mg/L	0.005	SW6020	09/09/13 17:19	PER	7440-50-8	
Iron, Dissolved	0.25	mg/L	0.02	E200.8	09/09/13 17:21	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 17:21	PER	7439-92-1	
Lead	0.003	mg/L	0.003	SW6020	09/09/13 17:19	PER	7439-92-1	
Manganese, Dissolved	0.023	mg/L	0.005	SW6020	09/09/13 17:21	PER	7439-96-5	
Manganese	0.029	mg/L	0.005	SW6020	09/09/13 17:19	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:43	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:41	CCM	7439-97-6	
Nickel, Dissolved	0.006	mg/L	0.005	SW6020	09/09/13 17:21	PER	7440-02-0	
Nickel	0.008	mg/L	0.005	SW6020	09/09/13 17:19	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:21	PER	7782-49-2	

Lab Sample ID: S57783.03 (continued)
Sample Tag: Dup #7

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 17:19	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 17:21	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 17:19	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:21	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 17:19	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 17:21	PER	7440-66-6	
Zinc	0.006	mg/L	0.005	SW6020	09/09/13 17:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/03/13 23:19	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/03/13 23:19	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	86-73-7	

B-Compound also found in associated method blank

Lab Sample ID: S57783.03 (continued)
Sample Tag: Dup #7

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/03/13 23:19	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 18:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 20:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 20:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 20:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	71-55-6	

Lab Sample ID: S57783.03 (continued)
Sample Tag: Dup #7

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 20:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 20:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 20:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:22	WAT	96-12-8	
Organics								
Methane in Water	16	ug/L	0.5	RSK-175	08/30/13 10:56	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57783.04
Sample Tag: Trip Blank
Collected Date/Time: 08/22/2013 07:00
Matrix: Liquid
COC Reference: 75444

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 18:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 20:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 20:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 20:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 20:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 20:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	79-34-5	

Lab Sample ID: S57783.04 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 20:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 20:43	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75444

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE Rogers
COMPANY: ~~PMF~~ ARCADIS
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8837 P.O. NO.:
E-MAIL ADDRESS: LANCE.Rogers@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: PLANT 6
SAMPLER(S) - PLEASE PRINT & SIGN NAME: SS

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ ~~Detroit~~ Lans ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs	TCL SVOCs	TAL Metals	Diss Fe MN	Sulfate Nitrate	CO2 Alkalinity	Methane	Diss Metals
57783.01	8/22	1350	MW-0308 (8221 3)	GW	12	3	6	3					X	X	X	X	X	X	X	X
.02	8/22	1635	MW-0307 (8221 3)	GW	11	3	6	2					X	X	X	X	X	X	X	
.03	8/22	—	DUP #7	GW		3	6	3					X	X	X	X	X	X	X	X
.04	8/22	0700	TRIP Blank	L	1								X							

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☐ Sampler DATE 8/22/13 TIME 1750
RECEIVED BY: SIGNATURE/ORGANIZATION Jim Sterling DATE 8/22/13 TIME 1750

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Mel DATE 8.23.13 TIME 9:15

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE 8/23/13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tabatha Fant DATE 8/23/13 TIME 945

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308505	08/28/2013	S57783

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308505**
Project:	Subcontract Lab Services	Description:	S57783
Client Sample ID:	**57783.01**	Sampled:	08/22/13 13:50
Lab Sample ID:	**1308505-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 15:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**13**	0.50	ug/L	1	RSK-175	08/30/13 10:48	JMF	1309152

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308505**
Project:	Subcontract Lab Services	Description:	S57783
Client Sample ID:	**57783.02**	Sampled:	08/22/13 16:35
Lab Sample ID:	**1308505-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 15:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**51**	0.50	ug/L	1	RSK-175	08/30/13 10:52	JMF	1309152

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308505**
Project:	Subcontract Lab Services	Description:	S57783
Client Sample ID:	**57783.03**	Sampled:	08/22/13 00:00
Lab Sample ID:	**1308505-03**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 15:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**16**	0.50	ug/L	1	RSK-175	08/30/13 10:56	JMF	1309152

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309152 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane		33.0	**26.8**	81	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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Cooler-Client/ Army Green

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com WO#1308505

C.O.C. PAGE # _____ OF _____

37-16
75723

Rack #249G

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague SAME: X
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: S 57783
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/22	1350	57783.01	GW	3		X						X	
02	8/22	1635	57783.02	↓	↓		↓						↓	*Sub'd to Trimatrix
03	8/22	—	57783.03	↓	↓		↓						↓	

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/27/13 TIME: 1400
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5972 9877 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Sarah Schadow / TriMatrix DATE: 8/28/13 TIME: 1205

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308505
Receipt Record Page/Line #: 37-16 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): SMS 8/28/13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
Client/Army/Green 1405			
Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: (Dispersed) / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C
Temp Blank:	Temp Blank:	Temp Blank:	Temp Blank:
TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative
1 5.2 — 5.2	1	1	1
2 5.6 — 5.6	2	2	2
3 4.9 — 4.9	3	3	3
Average °C: 5.2	Average °C	Average °C	Average °C
☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?
☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 75723

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐		Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/28/13 1205	8/28/13 1430	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57791.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
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Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

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Report Summary

Lab Sample ID(s): S57791.01-S57791.02
Project: B0064480.2013
Collected Date: 08/23/2013
Submitted Date/Time: 08/23/2013 10:45
Sampled by: Mike Kohagen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57791.01	MW-13-33 (08232013)	Groundwater	08/23/2013 08:00
S57791.02	Trip Blank (08232013)	Liquid	08/23/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57791.01
Sample Tag: MW-13-33 (08232013)
Collected Date/Time: 08/23/2013 08:00
Matrix: Groundwater
COC Reference: 75702

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
3	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Alkalinity as CaCO3	488	mg/L	1	2320B	08/29/13 10:18	JDP		
Carbon Dioxide	187	mg/L	10	4500-CO2C	08/23/13 13:20	JDP	124-38-9	
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 13:43	JDP	14797-55-8	
Sulfate	175	mg/L	5	E300.0	08/23/13 13:43	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:05	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 18:03	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/09/13 18:05	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/09/13 18:03	PER	7440-38-2	
Barium, Dissolved	0.106	mg/L	0.005	SW6020	09/09/13 18:05	PER	7440-39-3	
Barium	0.249	mg/L	0.005	SW6020	09/09/13 18:03	PER	7440-39-3	
Boron, Dissolved	0.14	mg/L	0.04	SW6020	09/09/13 18:05	PER	7440-42-8	
Boron	0.14	mg/L	0.04	SW6020	09/09/13 18:03	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 18:05	PER	7440-43-9	
Cadmium	0.0018	mg/L	0.0005	SW6020	09/09/13 18:03	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:05	PER	7440-47-3	
Chromium	0.017	mg/L	0.005	SW6020	09/09/13 18:03	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:05	PER	7440-48-4	
Cobalt	0.021	mg/L	0.005	SW6020	09/09/13 18:03	PER	7440-48-4	
Copper, Dissolved	0.006	mg/L	0.005	SW6020	09/09/13 18:05	PER	7440-50-8	
Copper	0.120	mg/L	0.005	SW6020	09/09/13 18:03	PER	7440-50-8	
Iron, Dissolved	0.71	mg/L	0.02	E200.8	09/09/13 18:05	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 18:05	PER	7439-92-1	
Lead	0.065	mg/L	0.003	SW6020	09/09/13 18:03	PER	7439-92-1	
Manganese, Dissolved	0.163	mg/L	0.005	SW6020	09/09/13 18:05	PER	7439-96-5	
Manganese	1.38	mg/L	0.005	SW6020	09/09/13 18:03	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:47	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:45	CCM	7439-97-6	
Nickel, Dissolved	0.020	mg/L	0.005	SW6020	09/09/13 18:05	PER	7440-02-0	
Nickel	0.065	mg/L	0.005	SW6020	09/09/13 18:03	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:05	PER	7782-49-2	

Lab Sample ID: S57791.01 (continued)
Sample Tag: MW-13-33 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 18:03	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 18:05	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 18:03	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:05	PER	7440-62-2	
Vanadium	0.027	mg/L	0.005	SW6020	09/09/13 18:03	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:05	PER	7440-66-6	
Zinc	0.183	mg/L	0.005	SW6020	09/09/13 18:03	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	09/04/13 16:08	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 16:08	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	84-66-2	
Dimethyl phthalate	10	ug/L	1	SW8270C	09/04/13 16:08	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	3	ug/L	1	SW8270C	09/04/13 16:08	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	86-73-7	

B-Compound also found in associated method blank

Lab Sample ID: S57791.01 (continued)
Sample Tag: MW-13-33 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 16:08	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 18:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 21:45	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 21:45	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 21:45	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	71-55-6	

Lab Sample ID: S57791.01 (continued)
Sample Tag: MW-13-33 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 21:45	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 21:45	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 21:45	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 21:45	WAT	96-12-8	
Organics								
Methane in Water	1.2	ug/L	0.5	RSK-175	08/30/13 10:44	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57791.02
Sample Tag: Trip Blank (08232013)
Collected Date/Time: 08/23/2013 00:01
Matrix: Liquid
COC Reference: 75702

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 19:08	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 22:05	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 22:05	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 22:05	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 22:05	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 22:05	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	79-34-5	

Lab Sample ID: S57791.02 (continued)
Sample Tag: Trip Blank (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 22:05	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 22:05	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75702

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8837 P.O. NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013
SAMPLER(S) - PLEASE PRINT/SIGN NAME: MARC KONAGEN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 1,4-Dioxane 8260 SIM	TCL SVOC's	TAL Metals - Total	TAL Metals - Dissolved	Dissolved Fe & Mn	Methane, CO_2, Alkalinity, Nitrate, Sulfate				
57791.01	8/23/13	0800	MW-13-33 (08232013)	GW	12	3	6	3					X	X	X	X	X	X	1			
.02	8/23/13	–	TRIP BLANK (08232013)		1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☑ Sampler DATE 08/23/13 TIME 1005
RECEIVED BY: SIGNATURE/ORGANIZATION MSA DATE 8-23-13 TIME 1005
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION Barbara Ball MSA DATE 8-23-13 TIME 10:45
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 8/23/13 TIME 10:45
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308504	08/28/2013	S57791

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308504**
Project:	Subcontract Lab Services	Description:	S57791
Client Sample ID:	**57791.01**	Sampled:	08/23/13 08:00
Lab Sample ID:	**1308504-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**1.2**	0.50	ug/L	1	RSK-175	08/30/13 10:44	JMF	1309152

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309152 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane		33.0	**26.8**	81	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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Cooler = Client
Amy Green

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com WO# 1308504

C.O.C. PAGE # _____ OF _____

37-15
75724

Rack #440B

CHAIN OF CUSTODY RECORD

REPORT TO		INVOICE TO	
CONTACT NAME	Tabitha Faust	CONTACT NAME	Julie Teague
COMPANY	Merit Labs	COMPANY	X SAME
ADDRESS		ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
PHONE NO. / FAX NO. / P.O. NO.		PHONE NO. / E-MAIL ADDRESS	
E-MAIL ADDRESS / QUOTE NO.			

PROJECT NO./NAME: 557791

SAMPLER(S) - PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	6/23	800	557791.01	GW	3	X							X	*Sub'd to TriMatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 6/27/13 TIME: 1600

RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5972 9877 DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME

RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME

RECEIVED BY: SIGNATURE/ORGANIZATION: Shakkhaton/TriMatrix DATE: 8/28/13 TIME: 1205

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit
Receipt Record Page/Line #: 37-15
Work Order #: 1308504
New / Add To
Project Chemist | Sample #s

Recorded by (initials/date): SMS 8/28/13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1
☑ IR Gun (#202)
Thermometer Used ☐ Digital Thermometer (#54) ☐ Other (#_____)
☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
Client/Amy Green 1405			
Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C
Temp Blank:	Temp Blank:	Temp Blank:	Temp Blank:
TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative
1 5.2 — 5.2	1	1	1
2 5.6 — 5.6	2	2	2
3 4.9 — 4.9	3	3	3
Average °C: 5.2	Average °C	Average °C	Average °C
☑ Cooler ID on COC? ☐ VOC Trip Blank received?	☐ Cooler ID on COC? ☐ VOC Trip Blank received?	☐ Cooler ID on COC? ☐ VOC Trip Blank received?	☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 75724

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☐	Received pre-preserved VOC soils?
		☐	MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/28/13 1205	8/28/13 1430	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57801.01(01)
Generated on 09/10/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57801.01-S57801.04
Project: RACER LANSING PLANT 6
Collected Date: 08/23/2013
Submitted Date/Time: 08/23/2013 16:30
Sampled by: Billy J Coben
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified.Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57801.01	B-BP-16 (08232013)	Groundwater	08/23/2013 13:10
S57801.02	MWBP-12A-UST-1-4 (08232013)	Groundwater	08/23/2013 15:10
S57801.03	FIELD BLANK-2 (08232013)	Liquid	08/23/2013 15:55
S57801.04	TRIP BLANK (08232013)	Liquid	08/23/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57801.01
Sample Tag: B-BP-16 (08232013)
Collected Date/Time: 08/23/2013 13:10
Matrix: Groundwater
COC Reference: 75718

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
2	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Inorganics								
Alkalinity as CaCO3	604	mg/L	1	2320B	08/29/13 10:20	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 20:22	JDP	14797-55-8	
Sulfate	308	mg/L	20	E300.0	08/23/13 21:55	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 18:10	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/09/13 18:10	PER	7440-38-2	
Barium	0.185	mg/L	0.005	SW6020	09/09/13 18:10	PER	7440-39-3	
Boron	0.13	mg/L	0.04	SW6020	09/09/13 18:10	PER	7440-42-8	
Cadmium	0.0011	mg/L	0.0005	SW6020	09/09/13 18:10	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 18:10	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 18:10	PER	7440-48-4	
Copper	0.007	mg/L	0.005	SW6020	09/09/13 18:10	PER	7440-50-8	
Iron, Dissolved	2.91	mg/L	0.02	E200.8	09/09/13 18:12	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 18:10	PER	7439-92-1	
Manganese, Dissolved	0.436	mg/L	0.005	E200.8	09/09/13 18:12	PER	7439-96-5	
Manganese	0.402	mg/L	0.005	SW6020	09/09/13 18:10	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:48	CCM	7439-97-6	
Nickel	0.016	mg/L	0.005	SW6020	09/09/13 18:10	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 18:10	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 18:10	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 18:10	PER	7440-62-2	
Zinc	0.017	mg/L	0.005	SW6020	09/09/13 18:10	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	101-55-3	

Lab Sample ID: S57801.01 (continued)
Sample Tag: B-BP-16 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 16:42	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	84-66-2	
Dimethyl phthalate	9	ug/L	1	SW8270C	09/04/13 16:42	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	91-20-3	

B-Compound also found in associated method blank

Lab Sample ID: S57801.01 (continued)
Sample Tag: B-BP-16 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 16:42	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 16:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 22:05	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 22:05	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 22:05	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	71-55-6	
Cyclohexane	2	ug/L	1	SW8260B	08/28/13 22:05	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 22:05	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 22:05	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-27-4	
Methyl cyclohexane	2	ug/L	1	SW8260B	08/28/13 22:05	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	124-48-1	

Lab Sample ID: S57801.01 (continued)
Sample Tag: B-BP-16 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 22:05	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	100-42-5	
Isopropylbenzene	3	ug/L	1	SW8260B	08/28/13 22:05	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 22:05	WAT	96-12-8	
Organics								
Methane in Water	890	ug/L	20	RSK-175	08/30/13 12:11	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57801.02
Sample Tag: MWBP-12A-UST-1-4 (08232013)
Collected Date/Time: 08/23/2013 15:10
Matrix: Groundwater
COC Reference: 75718

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
2	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 14:00	LBR		
Inorganics								
Alkalinity as CaCO3	398	mg/L	1	2320B	08/29/13 10:22	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 20:33	JDP	14797-55-8	
Sulfate	390	mg/L	20	E300.0	08/23/13 22:07	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 18:14	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	09/09/13 18:14	PER	7440-38-2	
Barium	0.517	mg/L	0.005	SW6020	09/09/13 18:14	PER	7440-39-3	
Boron	0.06	mg/L	0.04	SW6020	09/09/13 18:14	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 18:14	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/09/13 18:14	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 18:14	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/09/13 18:14	PER	7440-50-8	
Iron, Dissolved	8.56	mg/L	0.02	E200.8	09/09/13 18:20	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 18:14	PER	7439-92-1	
Manganese, Dissolved	0.422	mg/L	0.005	E200.8	09/09/13 18:20	PER	7439-96-5	
Manganese	0.424	mg/L	0.005	SW6020	09/09/13 18:14	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:50	CCM	7439-97-6	
Nickel	0.033	mg/L	0.005	SW6020	09/09/13 18:14	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 18:14	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 18:14	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 18:14	PER	7440-62-2	
Zinc	0.072	mg/L	0.005	SW6020	09/09/13 18:14	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	101-55-3	

Lab Sample ID: S57801.02 (continued)
Sample Tag: MWBP-12A-UST-1-4 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 17:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	09/04/13 17:16	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	91-20-3	

B-Compound also found in associated method blank

Lab Sample ID: S57801.02 (continued)
Sample Tag: MWBP-12A-UST-1-4 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 17:16	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 19:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 18:00	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 18:00	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 18:00	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 18:00	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 18:00	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	124-48-1	

Lab Sample ID: S57801.02 (continued)
Sample Tag: MWBP-12A-UST-1-4 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 18:00	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:00	WAT	96-12-8	
Organics								
Methane in Water	42	ug/L	0.5	RSK-175	08/30/13 12:54	TRX	74-82-8	O

O-Analysis performed by outside laboratory.See attached report.

Analytical Laboratory Report

Lab Sample ID: S57801.03
Sample Tag: FIELD BLANK-2 (08232013)
Collected Date/Time: 08/23/2013 15:55
Matrix: Liquid
COC Reference: 75718

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
BNA Extraction (Replicate 01)	Completed			3510C	09/06/13 11:59	EMR		F
pH check for VOCs	<2	STD Units		N/A	08/28/13 14:00	LBR		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	83-32-9	S
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	208-96-8	S
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	98-86-2	S
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	120-12-7	S
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	1912-24-9	S
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	92-52-4	S
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	101-55-3	S
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	84-74-2	S
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	100-52-7	S
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	56-55-3	S
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	50-32-8	S
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	205-99-2	S
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	191-24-2	S
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	207-08-9	S
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	85-68-7	S
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	91-58-7	S
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	95-57-8	S
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	59-50-7	S
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	106-47-8	S
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	7005-72-3	S
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	105-60-2	S
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	86-74-8	S
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	111-91-1	S
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	111-44-4	S
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	108-60-1	S
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	218-01-9	S
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	120-83-2	S
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	105-67-9	S
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	51-28-5	S
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	121-14-2	S
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	606-20-2	S
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	534-52-1	S
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 17:50	PL	53-70-3	S
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	132-64-9	S

F-Analysis run outside of holding time
S-Surrogate recovery outside of control limits

Lab Sample ID: S57801.03 (continued)
Sample Tag: FIELD BLANK-2 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	84-66-2	S
Dimethyl phthalate	3	ug/L	1	SW8270C	09/04/13 17:50	PL	131-11-3	BS
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	117-81-7	S
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	206-44-0	S
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	86-73-7	S
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	87-68-3	S
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	77-47-4	S
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	67-72-1	S
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	193-39-5	S
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	78-59-1	S
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	91-57-6	S
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	95-48-7	S
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	3/4-Cresol	S
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	88-74-4	S
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	88-75-5	S
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	99-09-2	S
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	100-01-6	S
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	100-02-7	S
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	621-64-7	S
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	86-30-6	S
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	91-20-3	S
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	98-95-3	S
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	117-84-0	S
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	87-86-5	S
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	85-01-8	S
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	108-95-2	S
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	129-00-0	S
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	95-95-4	S
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	88-06-2	S
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 17:50	PL	118-74-1	S
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	83-32-9	G
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	208-96-8	G
Acetophenone	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	98-86-2	G
Anthracene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	120-12-7	G
Atrazine	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	1912-24-9	G
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	92-52-4	G
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	101-55-3	G
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	84-74-2	G
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	100-52-7	G
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	56-55-3	G
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	50-32-8	G
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	205-99-2	G
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	191-24-2	G
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	207-08-9	G

S-Surrogate recovery outside of control limits
B-Compound also found in associated method blank
G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S57801.03 (continued)
Sample Tag: FIELD BLANK-2 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	85-68-7	G
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	91-58-7	G
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	95-57-8	G
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	59-50-7	G
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	106-47-8	G
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	7005-72-3	G
Caprolactam	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	105-60-2	G
Carbazole	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	86-74-8	G
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	111-91-1	G
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	111-44-4	G
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	108-60-1	G
Chrysene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	218-01-9	G
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	120-83-2	G
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	105-67-9	G
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	51-28-5	G
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	121-14-2	G
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	606-20-2	G
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	534-52-1	G
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/07/13 20:05	PL	53-70-3	G
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	132-64-9	G
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	84-66-2	G
Dimethyl phthalate	2	ug/L	1	SW8270C	09/07/13 20:05	PL	131-11-3	BG
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	117-81-7	G
Fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	206-44-0	G
Fluorene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	86-73-7	G
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	87-68-3	G
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	77-47-4	G
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	67-72-1	G
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	193-39-5	G
Isophorone	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	78-59-1	G
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	91-57-6	G
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	95-48-7	G
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	3/4-Cresol	G
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	88-74-4	G
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	88-75-5	G
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	99-09-2	G
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	100-01-6	G
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	100-02-7	G
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	621-64-7	G
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	86-30-6	G
Naphthalene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	91-20-3	G
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	98-95-3	G
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	117-84-0	G
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	87-86-5	G
Phenanthrene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	85-01-8	G
Phenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	108-95-2	G
Pyrene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	129-00-0	G

G-Estimated result due to extraction run outside of holding time
B-Compound also found in associated method blank

Lab Sample ID: S57801.03 (continued)
Sample Tag: FIELD BLANK-2 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	95-95-4	G
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	88-06-2	G
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/07/13 20:05	PL	118-74-1	G
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 20:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 18:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 18:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 18:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 18:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 18:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 18:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	95-47-6	

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S57801.03 (continued)
Sample Tag: FIELD BLANK-2 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:21	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57801.04
Sample Tag: TRIP BLANK (08232013)
Collected Date/Time: 08/23/2013 00:01
Matrix: Liquid
COC Reference: 75718

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 20:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 18:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 18:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 18:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 18:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 18:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	79-34-5	

Lab Sample ID: S57801.04 (continued)
Sample Tag: TRIP BLANK (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 18:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:42	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75718

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8837 P.O. NO.: B00644481-2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING RAM-6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COSBY

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC + 1,4-D + 1,3-D	TCL SVOC	TAL METALS Dissolved Fe, Mn	Sulfate, Nitrate, Alkalinity	METHANE
57801.01	8/23/13	~~12:35~~ 13:10	B-BP-16 (08232013)	GW	11	3	6	2					3	2	1	1	1	3
.02	8/23/13	15:10	MW8P-12A-UST-1-4 (08232013)	GW	11	3	6	2					3	2	1	1	1	3
.03	8/23/13	15:55	FIELD BLANK-2 (08232013)	L	5	2	3						3	2				
.04	—	—	TRIP BLANK (08232013)	L	1		1						1					

8-23-13

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS	Sampler	DATE 8-23-13	TIME 16:15
RECEIVED BY: SIGNATURE/ORGANIZATION	CHRIS		DATE 8-23	TIME 16:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE 8-23	TIME 16:30
RECEIVED BY: SIGNATURE/ORGANIZATION	MERIT		DATE 8-23	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE 8/23/13	TIME 1630
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL 4.6
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 05, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308512	08/28/2013	S57801

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

This report shall not be reproduced, except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308512**
Project:	Subcontract Lab Services	Description:	S57801
Client Sample ID:	**57801.01**	Sampled:	08/23/13 13:10
Lab Sample ID:	**1308512-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**890**	20	ug/L	40	RSK-175	08/30/13 12:11	JMF	1309152

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308512**
Project:	Subcontract Lab Services	Description:	S57801
Client Sample ID:	**57801.02**	Sampled:	08/23/13 15:10
Lab Sample ID:	**1308512-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**42**	0.50	ug/L	1	RSK-175	08/30/13 12:54	JMF	1309152

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309152 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane		33.0	**26.8**	81	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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Cooler - Client / Army green

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com WO#1308512

C.O.C. PAGE # _____ OF _____

37-20
75483

CHAIN OF CUSTODY RECORD

Rack # 612R

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: S 57801
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/23	1310	57801.01	GW	3		X						X	
02	8/23	1510	57801.02	GW	3		X						X	*Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/27/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 12 466 47703 5972 9877 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Sarah Schaberg / TriMatrix DATE: 8/28/13 TIME: 1205

SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL: _____

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 130852
Receipt Record Page/Line # | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): SMS 8/28/13

☑ Cooler ☐ Box ☐ Other | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler # / Time: Client/Army Green / 1405

Custody Seals:
- ☑ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location: (Dispersed) / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☑ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	5.2	–	5.2
2	5.6	–	5.6
3	4.9	–	4.9
Average °C			5.2

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # / Time:

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # / Time:

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

Cooler # / Time:

Custody Seals:
- ☐ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☐ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☐ Temperature Blank (TB)
- ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

- ☐ Cooler ID on COC?
- ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other 75483

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Initials: ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☑ NONE RECEIVED
- ☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/28/13 1205	8/28/13 1430	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57802.01(01)
Generated on 09/11/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57802.01-S57802.05
Project: Monitoring
Collected Date: 08/23/2013
Submitted Date/Time: 08/23/2013 16:30
Sampled by: Unknown
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57802.01	MW-04-06R(08232013)	Groundwater	08/23/2013 12:09
S57802.02	DUP-08(08232013)	Groundwater	08/23/2013 00:01
S57802.03	MWBP-13A-UST1-4 (08232013)	Groundwater	08/23/2013 14:23
S57802.04	EQUIPBLANK-08 (08232013)	Groundwater	08/23/2013 15:40
S57802.05	TRIPBLANK (08232013)	Liquid	08/23/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57802.01
Sample Tag: MW-04-06R(08232013)
Collected Date/Time: 08/23/2013 12:09
Matrix: Groundwater
COC Reference: 75701

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
3	125ml Plastic	HNO3	Yes	4.7	IR
1	500ml Plastic	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/29/13 10:31	LBR		
Inorganics								
Alkalinity as CaCO3	375	mg/L	1	2320B	08/29/13 10:24	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 20:45	JDP	14797-55-8	
Sulfate	113	mg/L	5	E300.0	08/23/13 20:45	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:24	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 18:23	PER	7440-36-0	
Arsenic, Dissolved	0.023	mg/L	0.002	SW6020	09/09/13 18:24	PER	7440-38-2	
Arsenic	0.022	mg/L	0.002	SW6020	09/09/13 18:23	PER	7440-38-2	
Barium, Dissolved	0.382	mg/L	0.005	SW6020	09/09/13 18:24	PER	7440-39-3	
Barium	0.412	mg/L	0.005	SW6020	09/09/13 18:23	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	09/09/13 18:24	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020	09/09/13 18:23	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 18:24	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 18:23	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:24	PER	7440-47-3	
Chromium	0.007	mg/L	0.005	SW6020	09/09/13 18:23	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:24	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 18:23	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:24	PER	7440-50-8	
Copper	0.009	mg/L	0.005	SW6020	09/09/13 18:23	PER	7440-50-8	
Iron, Dissolved	6.93	mg/L	0.02	E200.8	09/09/13 18:24	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 18:24	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 18:23	PER	7439-92-1	
Manganese, Dissolved	0.052	mg/L	0.005	SW6020	09/09/13 18:24	PER	7439-96-5	
Manganese	0.109	mg/L	0.005	SW6020	09/09/13 18:23	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:54	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:52	CCM	7439-97-6	
Nickel, Dissolved	0.026	mg/L	0.005	SW6020	09/09/13 18:24	PER	7440-02-0	
Nickel	0.031	mg/L	0.005	SW6020	09/09/13 18:23	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:24	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 18:23	PER	7782-49-2	

Lab Sample ID: S57802.01 (continued)
Sample Tag: MW-04-06R(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 18:24	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 18:23	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:24	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 18:23	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:24	PER	7440-66-6	
Zinc	0.010	mg/L	0.005	SW6020	09/09/13 18:23	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 18:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	09/04/13 18:25	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	87-68-3	

B-Compound also found in associated method blank

Lab Sample ID: S57802.01 (continued)
Sample Tag: MW-04-06R(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 18:25	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 20:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 19:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 19:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 19:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	110-82-7	

Lab Sample ID: S57802.01 (continued)
Sample Tag: MW-04-06R(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 19:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 19:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 19:01	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 19:01	WAT	96-12-8	
Organics								
Methane in Water	8.2	ug/L	0.5	RSK-175	08/30/13 11:48	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57802.02
Sample Tag: DUP-08(08232013)
Collected Date/Time: 08/23/2013 00:01
Matrix: Groundwater
COC Reference: 75701

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
2	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
Metal Digestion	Completed			3015A	09/09/13 09:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/29/13 10:31	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:32	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/09/13 18:26	PER	7440-36-0	
Arsenic, Dissolved	0.022	mg/L	0.002	SW6020	09/09/13 18:32	PER	7440-38-2	
Arsenic	0.023	mg/L	0.002	SW6020	09/09/13 18:26	PER	7440-38-2	
Barium, Dissolved	0.386	mg/L	0.005	SW6020	09/09/13 18:32	PER	7440-39-3	
Barium	0.403	mg/L	0.005	SW6020	09/09/13 18:26	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	09/09/13 18:32	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020	09/09/13 18:26	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 18:32	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/09/13 18:26	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:32	PER	7440-47-3	
Chromium	0.007	mg/L	0.005	SW6020	09/09/13 18:26	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:32	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/09/13 18:26	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:32	PER	7440-50-8	
Copper	0.009	mg/L	0.005	SW6020	09/09/13 18:26	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/09/13 18:32	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/09/13 18:26	PER	7439-92-1	
Manganese, Dissolved	0.052	mg/L	0.005	SW6020	09/09/13 18:32	PER	7439-96-5	
Manganese	0.106	mg/L	0.005	SW6020	09/09/13 18:26	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:58	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 14:56	CCM	7439-97-6	
Nickel, Dissolved	0.030	mg/L	0.005	SW6020	09/09/13 18:32	PER	7440-02-0	
Nickel	0.030	mg/L	0.005	SW6020	09/09/13 18:26	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:32	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/09/13 18:26	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/09/13 18:32	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/09/13 18:26	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:32	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/09/13 18:26	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/09/13 18:32	PER	7440-66-6	
Zinc	0.009	mg/L	0.005	SW6020	09/09/13 18:26	PER	7440-66-6	

Lab Sample ID: S57802.02 (continued)
Sample Tag: DUP-08(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 18:59	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/04/13 18:59	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S57802.02 (continued)
Sample Tag: DUP-08(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 18:59	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 20:57	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 19:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 19:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 19:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 19:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 19:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-27-4	

Lab Sample ID: S57802.02 (continued)
Sample Tag: DUP-08(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 19:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 19:22	WAT	96-12-8	

Lab Sample ID: S57802.03
Sample Tag: MWBP-13A-UST1-4 (08232013)
Collected Date/Time: 08/23/2013 14:23
Matrix: Groundwater
COC Reference: 75701

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/29/13 10:31	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 14:27	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/10/13 14:27	PER	7440-38-2	
Barium	0.173	mg/L	0.005	SW6020	09/10/13 14:27	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/10/13 14:27	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 14:27	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 14:27	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 14:27	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/10/13 14:27	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 14:27	PER	7439-92-1	
Manganese	0.460	mg/L	0.005	SW6020	09/10/13 14:27	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:13	CCM	7439-97-6	
Nickel	0.030	mg/L	0.005	SW6020	09/10/13 14:27	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020	09/10/13 14:27	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 14:27	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/10/13 14:27	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/10/13 14:27	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	91-58-7	

Lab Sample ID: S57802.03 (continued)
Sample Tag: MWBP-13A-UST1-4 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 19:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	09/04/13 19:33	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 19:33	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S57802.03 (continued)
Sample Tag: MWBP-13A-UST1-4 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 21:15	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 19:42	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 19:42	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 19:42	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 19:42	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 19:42	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 19:42	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	120-82-1	

Lab Sample ID: S57802.03 (continued)
Sample Tag: MWBP-13A-UST1-4 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 19:42	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57802.04
Sample Tag: EQUIPBLANK-08 (08232013)
Collected Date/Time: 08/23/2013 15:40
Matrix: Groundwater
COC Reference: 75701

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/29/13 10:31	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/10/13 14:17	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/10/13 14:17	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 14:17	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 14:17	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:15	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 14:17	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/10/13 14:17	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	91-58-7	

Lab Sample ID: S57802.04 (continued)
Sample Tag: EQUIPBLANK-08 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 20:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	84-66-2	
Dimethyl phthalate	3	ug/L	1	SW8270C	09/04/13 20:07	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	98-95-3	
di-n-Octyl phthalate	2	ug/L	1	SW8270C	09/04/13 20:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 20:07	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S57802.04 (continued)
Sample Tag: EQUIPBLANK-08 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 21:33	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 20:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 20:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 20:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 20:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 20:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 20:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	120-82-1	

Lab Sample ID: S57802.04 (continued)
Sample Tag: EQUIPBLANK-08 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 20:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57802.05
Sample Tag: TRIPBLANK (08232013)
Collected Date/Time: 08/23/2013 00:01
Matrix: Liquid
COC Reference: 75701

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/29/13 10:31	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 21:52	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 20:24	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 20:24	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 20:24	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 20:24	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 20:24	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	79-34-5	

Lab Sample ID: S57802.05 (continued)
Sample Tag: TRIPBLANK (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 20:24	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 20:24	WAT	96-12-8	

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www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75701

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 8102298594 FAX NO.:
P.O. NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME:
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC's 1,4-DIOXANE 8260 SIM	TCL SVOC's	TAL METALS-TOTAL	TAL METALS-DISSOLVED	DISSOLVED Fe (MN)	METHANE	ALKALINITY/SULFATE/NITRATE			
57802.01	8/23/13	1209	MW-04-060(R)(08232013)	GW	12	3	6	3					X	X	X	X	X	X	X			
.02	8/23/13	—	DUPE-08(08232013)	GW	7	2	3	2					X	X	X	X						
.03	8/23/13	1423	MWBP-13A-UST1-4(08232013)	GW	6	2	3	1					X	X	X							
.04	8/23/13	1540	EQUIP BLANK-08(08232013)	GW	6	2	3	1					X	X	X							
.05	8/23/13	—	TRIP BLANK(08232013)		1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
		8.23	16:15
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8.23	16:15
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8.23	16:30
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	8/23/13	1620

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 4.7

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 05, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308510	08/28/2013	S57802

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308510**
Project:	Subcontract Lab Services	Description:	S57802
Client Sample ID:	**57802.01**	Sampled:	08/23/13 12:09
Lab Sample ID:	**1308510-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**8.2**	0.50	ug/L	1	RSK-175	08/30/13 11:48	JMF	1309152

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309152 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane		33.0	**26.8**	81	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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cooler-Client/Armygreen

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com WO # 1308510

C.O.C. PAGE # _____ OF _____

37-19
75484

Rack #521R

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Meritlabs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague SAME: X
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557802
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/23	1209	57802.01	GW	3		X						X	*$ubd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/27/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5972 9877 DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Sarah Shelton/TriMatrix DATE: 8/28/13 TIME: 1205

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308570 (New / Add To)
Receipt Record Page/Line #: 37-19 | Project Chemist | Sample #s

Recorded by (initials/date): SMS 8/28/13
☑ Cooler ☐ Box ☐ Other ____ | Qty Received: 1
☑ IR Gun (#202) | Thermometer Used ☐ Digital Thermometer (#54) ☐ Other (#____) | ☐ See Additional Cooler Information Form

Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Client/Army Green 1405	☑ None ☐ Present / Intact ☐ Present / Not Intact	☑ Dispersed ☐ Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1 5.2	−	5.2
2 5.6	−	5.6
3 4.9	−	4.9
Average °C		5.2
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other 75484
COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Initials: ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/28/13 1205	8/28/13 1430	Yes / (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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Individual sample results relate only to the sample tested.
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Analytical Laboratory Report

Report ID: S57803.01(01)
Generated on 09/11/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57803.01-S57803.05
Project: Plant 6 B0064481
Collected Date: 08/23/2013
Submitted Date/Time: 08/23/2013 16:30
Sampled by: Cliff Walls
P.O. #: B0064481

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57803.01	SME-MW-02	Groundwater	08/23/2013 07:30
S57803.02	MW-04-01 (6)	Groundwater	08/23/2013 10:55
S57803.03	MW-04-04 (R)	Groundwater	08/23/2013 13:15
S57803.04	MWBP-12-UST 1-4	Groundwater	08/23/2013 15:30
S57803.05	Trip Blank	Groundwater	08/23/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57803.01
Sample Tag: SME-MW-02
Collected Date/Time: 08/23/2013 07:30
Matrix: Groundwater
COC Reference: 75491

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
3	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Inorganics								
Alkalinity as CaCO3	305	mg/L	1	2320B	08/29/13 10:26	JDP		
Nitrate-N	0.6	mg/L	0.5	E300.0	08/23/13 22:18	JDP	14797-55-8	
Sulfate	63	mg/L	5	E300.0	08/23/13 22:18	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:37	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 14:35	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/10/13 14:37	PER	7440-38-2	
Arsenic	0.009	mg/L	0.002	SW6020	09/10/13 14:35	PER	7440-38-2	
Barium, Dissolved	0.420	mg/L	0.005	SW6020	09/10/13 14:37	PER	7440-39-3	
Barium	0.454	mg/L	0.005	SW6020	09/10/13 14:35	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	09/10/13 14:37	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	09/10/13 14:35	PER	7440-42-8	
Cadmium, Dissolved	0.0020	mg/L	0.0005	SW6020	09/10/13 14:37	PER	7440-43-9	
Cadmium	0.0059	mg/L	0.0005	SW6020	09/10/13 14:35	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:37	PER	7440-47-3	
Chromium	0.012	mg/L	0.005	SW6020	09/10/13 14:35	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:37	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 14:35	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:37	PER	7440-50-8	
Copper	0.023	mg/L	0.005	SW6020	09/10/13 14:35	PER	7440-50-8	
Iron, Dissolved	1.08	mg/L	0.02	E200.8	09/10/13 14:37	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/10/13 14:37	PER	7439-92-1	
Lead	0.033	mg/L	0.003	SW6020	09/10/13 14:35	PER	7439-92-1	
Manganese, Dissolved	0.046	mg/L	0.005	SW6020	09/10/13 14:37	PER	7439-96-5	
Manganese	0.359	mg/L	0.005	SW6020	09/10/13 14:35	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:19	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:17	CCM	7439-97-6	
Nickel, Dissolved	0.024	mg/L	0.005	SW6020	09/10/13 14:37	PER	7440-02-0	
Nickel	0.040	mg/L	0.005	SW6020	09/10/13 14:35	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:37	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 14:35	PER	7782-49-2	

Lab Sample ID: S57803.01 (continued)
Sample Tag: SME-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 14:37	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 14:35	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:37	PER	7440-62-2	
Vanadium	0.008	mg/L	0.005	SW6020	09/10/13 14:35	PER	7440-62-2	
Zinc, Dissolved	0.015	mg/L	0.005	SW6020	09/10/13 14:37	PER	7440-66-6	
Zinc	0.130	mg/L	0.005	SW6020	09/10/13 14:35	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 20:42	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	09/04/13 20:42	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	09/04/13 20:42	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	87-68-3	

B-Compound also found in associated method blank

Lab Sample ID: S57803.01 (continued)
Sample Tag: SME-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 20:42	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	14	ug/L	5	SW8260B - SIM	08/28/13 18:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 16:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 16:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 16:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	110-82-7	

Lab Sample ID: S57803.01 (continued)
Sample Tag: SME-MW-02

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 16:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 16:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 16:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:51	WAT	96-12-8	
Organics								
Methane in Water	Not detected	ug/L	0.5	RSK-175	08/30/13 11:31	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57803.02
Sample Tag: MW-04-01 (6)
Collected Date/Time: 08/23/2013 10:55
Matrix: Groundwater
COC Reference: 75491

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
3	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Inorganics								
Alkalinity as CaCO3	477	mg/L	1	2320B	08/29/13 10:28	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 21:08	JDP	14797-55-8	
Sulfate	645	mg/L	50	E300.0	08/23/13 22:30	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:58	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 14:56	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020	09/10/13 14:58	PER	7440-38-2	
Arsenic	0.004	mg/L	0.002	SW6020	09/10/13 14:56	PER	7440-38-2	
Barium, Dissolved	0.087	mg/L	0.005	SW6020	09/10/13 14:58	PER	7440-39-3	
Barium	0.091	mg/L	0.005	SW6020	09/10/13 14:56	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020	09/10/13 14:58	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020	09/10/13 14:56	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 14:58	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 14:56	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:58	PER	7440-47-3	
Chromium	0.011	mg/L	0.005	SW6020	09/10/13 14:56	PER	7440-47-3	
Cobalt, Dissolved	0.013	mg/L	0.005	SW6020	09/10/13 14:58	PER	7440-48-4	
Cobalt	0.014	mg/L	0.005	SW6020	09/10/13 14:56	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:58	PER	7440-50-8	
Copper	0.005	mg/L	0.005	SW6020	09/10/13 14:56	PER	7440-50-8	
Iron, Dissolved	2.13	mg/L	0.02	E200.8	09/10/13 14:58	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/10/13 14:58	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 14:56	PER	7439-92-1	
Manganese, Dissolved	0.603	mg/L	0.005	SW6020	09/10/13 14:58	PER	7439-96-5	
Manganese	0.624	mg/L	0.005	SW6020	09/10/13 14:56	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:23	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:21	CCM	7439-97-6	
Nickel, Dissolved	0.039	mg/L	0.005	SW6020	09/10/13 14:58	PER	7440-02-0	
Nickel	0.042	mg/L	0.005	SW6020	09/10/13 14:56	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:58	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 14:56	PER	7782-49-2	

Lab Sample ID: S57803.02 (continued)
Sample Tag: MW-04-01 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 14:58	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 14:56	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:58	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/10/13 14:56	PER	7440-62-2	
Zinc, Dissolved	0.007	mg/L	0.005	SW6020	09/10/13 14:58	PER	7440-66-6	
Zinc	0.010	mg/L	0.005	SW6020	09/10/13 14:56	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 21:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/04/13 21:16	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	09/04/13 21:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	87-68-3	

B-Compound also found in associated method blank

Lab Sample ID: S57803.02 (continued)
Sample Tag: MW-04-01 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 21:16	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 18:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 17:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 17:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 17:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	110-82-7	

Lab Sample ID: S57803.02 (continued)
Sample Tag: MW-04-01 (6)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 17:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 17:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	79-34-5	
Ethylbenzene	1	ug/L	1	SW8260B	08/28/13 17:11	WAT	100-41-4	
p,m-Xylene	5	ug/L	2	SW8260B	08/28/13 17:11	WAT		
o-Xylene	2	ug/L	1	SW8260B	08/28/13 17:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 17:11	WAT	96-12-8	
Organics								
Methane in Water	28	ug/L	0.5	RSK-175	08/30/13 11:35	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57803.03
Sample Tag: MW-04-04 (R)
Collected Date/Time: 08/23/2013 13:15
Matrix: Groundwater
COC Reference: 75491

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
3	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 22:38	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Inorganics								
Alkalinity as CaCO3	406	mg/L	1	2320B	08/29/13 10:30	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 21:19	JDP	14797-55-8	
Sulfate	51	mg/L	5	E300.0	08/23/13 21:19	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:46	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 14:44	PER	7440-36-0	
Arsenic, Dissolved	0.020	mg/L	0.002	SW6020	09/10/13 14:46	PER	7440-38-2	
Arsenic	0.019	mg/L	0.002	SW6020	09/10/13 14:44	PER	7440-38-2	
Barium, Dissolved	0.432	mg/L	0.005	SW6020	09/10/13 14:46	PER	7440-39-3	
Barium	0.435	mg/L	0.005	SW6020	09/10/13 14:44	PER	7440-39-3	
Boron, Dissolved	0.04	mg/L	0.04	SW6020	09/10/13 14:46	PER	7440-42-8	
Boron	0.04	mg/L	0.04	SW6020	09/10/13 14:44	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 14:46	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 14:44	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:46	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 14:44	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:46	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 14:44	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:46	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/10/13 14:44	PER	7440-50-8	
Iron, Dissolved	5.36	mg/L	0.02	E200.8	09/10/13 14:46	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/10/13 14:46	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 14:44	PER	7439-92-1	
Manganese, Dissolved	0.038	mg/L	0.005	SW6020	09/10/13 14:46	PER	7439-96-5	
Manganese	0.051	mg/L	0.005	SW6020	09/10/13 14:44	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:32	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:25	CCM	7439-97-6	
Nickel, Dissolved	0.015	mg/L	0.005	SW6020	09/10/13 14:46	PER	7440-02-0	
Nickel	0.017	mg/L	0.005	SW6020	09/10/13 14:44	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:46	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 14:44	PER	7782-49-2	

Lab Sample ID: S57803.03 (continued)
Sample Tag: MW-04-04 (R)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 14:46	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 14:44	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:46	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/10/13 14:44	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:46	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020	09/10/13 14:44	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/04/13 21:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	09/04/13 21:50	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	87-68-3	

B-Compound also found in associated method blank

Lab Sample ID: S57803.03 (continued)
Sample Tag: MW-04-04 (R)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/04/13 21:50	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 18:36	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 17:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 17:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 17:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	110-82-7	

Lab Sample ID: S57803.03 (continued)
Sample Tag: MW-04-04 (R)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 17:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 17:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 17:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 17:30	WAT	96-12-8	
Organics								
Methane in Water	9.4	ug/L	0.5	RSK-175	08/30/13 11:44	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57803.04
Sample Tag: MWBP-12-UST 1-4
Collected Date/Time: 08/23/2013 15:30
Matrix: Groundwater
COC Reference: 75491

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:00	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:54	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 14:49	PER	7440-36-0	
Arsenic, Dissolved	0.015	mg/L	0.002	SW6020	09/10/13 14:54	PER	7440-38-2	
Arsenic	0.016	mg/L	0.002	SW6020	09/10/13 14:49	PER	7440-38-2	
Barium, Dissolved	0.152	mg/L	0.005	SW6020	09/10/13 14:54	PER	7440-39-3	
Barium	0.150	mg/L	0.005	SW6020	09/10/13 14:49	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020	09/10/13 14:54	PER	7440-42-8	
Boron	0.13	mg/L	0.04	SW6020	09/10/13 14:49	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 14:54	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 14:49	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:54	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 14:49	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:54	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 14:49	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:54	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/10/13 14:49	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/10/13 14:54	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 14:49	PER	7439-92-1	
Manganese, Dissolved	0.152	mg/L	0.005	SW6020	09/10/13 14:54	PER	7439-96-5	
Manganese	0.148	mg/L	0.005	SW6020	09/10/13 14:49	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:29	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:27	CCM	7439-97-6	
Nickel, Dissolved	0.015	mg/L	0.005	SW6020	09/10/13 14:54	PER	7440-02-0	
Nickel	0.016	mg/L	0.005	SW6020	09/10/13 14:49	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:54	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 14:49	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 14:54	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 14:49	PER	7440-22-4	
Vanadium, Dissolved	0.007	mg/L	0.005	SW6020	09/10/13 14:54	PER	7440-62-2	
Vanadium	0.008	mg/L	0.005	SW6020	09/10/13 14:49	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 14:54	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020	09/10/13 14:49	PER	7440-66-6	

Lab Sample ID: S57803.04 (continued)
Sample Tag: MWBP-12-UST 1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	84-74-2	
Benzaldehyde	1	ug/L	1	SW8270C	09/05/13 16:15	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/05/13 16:15	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	84-66-2	
Dimethyl phthalate	12	ug/L	1	SW8270C	09/05/13 16:15	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	09/05/13 16:15	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S57803.04 (continued)
Sample Tag: MWBP-12-UST 1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/05/13 16:15	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 18:53	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	76-13-1	
Acetone	47	ug/L	10	SW8260B	08/28/13 17:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 17:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 17:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	71-55-6	
Cyclohexane	1	ug/L	1	SW8260B	08/28/13 17:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 17:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 17:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	56-23-5	
Benzene	2	ug/L	1	SW8260B	08/28/13 17:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-27-4	

Lab Sample ID: S57803.04 (continued)
Sample Tag: MWBP-12-UST 1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 17:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 17:50	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57803.05
Sample Tag: Trip Blank
Collected Date/Time: 08/23/2013 07:00
Matrix: Groundwater
COC Reference: 75491

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 19:11	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 18:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 18:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 18:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 18:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 18:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	79-34-5	

Lab Sample ID: S57803.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 18:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:10	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75491

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ANALYSIS
ADDRESS: 10599 CITATION DR SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: LANCE ROGERS @ ANALYSIS USA.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: PLANT 6 BOOK 4481
SAMPLER(S) - PLEASE PRINT/SIGN NAME: CLIFF WALLY

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1-4 SVOC	TCL SVOC	Miss Fe + Mn	Miss TAL Metal	TAL Metal	ALKNIT Sul	Methane				
57803.01		7:30	SME-MW-02	GW	12	3	6	3					X	X	X	X	X	X	X				
.02		10:55	MW-04-01 (6)	GW	12	3	6	3					X	X	X	X	X	X	X				
.03		13:15	MW-04-04 (R)	GW	12	3	6	3					X	X	X	X	X	X	X				
.04		15:30	MWBP-12 UST 1-4	GW	7	0	3	2					X	X		X	X						
.05		7:00	TRIP BLANK	GW	1	1							X										

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☐ Sampler DATE 8-23-13 TIME 16:40
RECEIVED BY: SIGNATURE/ORGANIZATION MERIT DATE 8-23-13 TIME 16:40

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 8/23/13 TIME 1730

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.8

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.1

September 05, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308508	08/28/2013	S57803

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

This report shall not be reproduced, except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308508**
Project:	Subcontract Lab Services	Description:	S57803
Client Sample ID:	**57803.01**	Sampled:	08/23/13 07:30
Lab Sample ID:	**1308508-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	<0.50	0.50	ug/L	1	RSK-175	08/30/13 11:31	JMF	1309152

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308508**
Project:	Subcontract Lab Services	Description:	S57803
Client Sample ID:	**57803.02**	Sampled:	08/23/13 10:55
Lab Sample ID:	**1308508-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**28**	0.50	ug/L	1	RSK-175	08/30/13 11:35	JMF	1309152

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308508**
Project:	Subcontract Lab Services	Description:	S57803
Client Sample ID:	**57803.03**	Sampled:	08/23/13 13:15
Lab Sample ID:	**1308508-03**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**9.4**	0.50	ug/L	1	RSK-175	08/30/13 11:44	JMF	1309152

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309152 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane		33.0	**26.8**	81	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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Cooler-Client / Army Green

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com WO # 1308508

C.O.C. PAGE # _____ OF _____

37-18
75477

Rack# 528R

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 57803
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/23	730	57803.01	GW	3		X						X	
02	↓	1055	57803.02	↓	↓		↓						↓	*Subid to Trimatrix
03		1315	57803.03											

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/27/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 47703 5972 9877 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Shala Shacklow/TriMatrix DATE: 8/28/13 TIME: 1205

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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Individual sample results relate only to the sample tested.

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308508
Receipt Record Page/Line #: 37-18 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): SMS 8/28/13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
Client/Army Green 1405			
Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C
Temp Blank:	Temp Blank:	Temp Blank:	Temp Blank:
TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative
1 5.2 — 5.2	1	1	1
2 5.6 — 5.6	2	2	2
3 4.9 — 4.9	3	3	3
Average °C: 5.2	Average °C	Average °C	Average °C
☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?
☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 75477

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Initials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		☐	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/28/13 1205	8/28/13 1430	Yes / (No)

Log In Forms - Receiving Log-In_Checklist

revision: 3.4

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

Analytical Laboratory Report

Report ID: S57804.01(01)
Generated on 09/11/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57804.01-S57804.02
Project: Plant 6/B0064481.2013.00003
Collected Date: 08/23/2013
Submitted Date/Time: 08/23/2013 16:30
Sampled by: Alex Villhauer
P.O. #: B0064481.2013.00003

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57804.01	MWBP-10A-UST1-4	Groundwater	08/23/2013 12:08
S57804.02	MWBP-11-UST1-4	Groundwater	08/23/2013 14:17

Analytical Laboratory Report

Lab Sample ID: S57804.01
Sample Tag: MWBP-10A-UST1-4
Collected Date/Time: 08/23/2013 12:08
Matrix: Groundwater
COC Reference: 75486

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 15:47	PER	7440-36-0	
Arsenic	0.036	mg/L	0.002	SW6020	09/10/13 15:47	PER	7440-38-2	
Barium	0.010	mg/L	0.005	SW6020	09/10/13 15:47	PER	7440-39-3	
Boron	0.12	mg/L	0.04	SW6020	09/10/13 15:47	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 15:47	PER	7440-43-9	
Chromium	0.005	mg/L	0.005	SW6020	09/10/13 15:47	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 15:47	PER	7440-48-4	
Copper	0.023	mg/L	0.005	SW6020	09/10/13 15:47	PER	7440-50-8	
Lead	0.012	mg/L	0.003	SW6020	09/10/13 15:47	PER	7439-92-1	
Manganese	0.020	mg/L	0.005	SW6020	09/10/13 15:47	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:52	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020	09/10/13 15:47	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 15:47	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 15:47	PER	7440-22-4	
Vanadium	0.026	mg/L	0.005	SW6020	09/10/13 15:47	PER	7440-62-2	
Zinc	0.016	mg/L	0.005	SW6020	09/10/13 15:47	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	91-58-7	

Lab Sample ID: S57804.01 (continued)
Sample Tag: MWBP-10A-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/05/13 16:49	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	84-66-2	
Dimethyl phthalate	10	ug/L	1	SW8270C	09/05/13 16:49	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/05/13 16:49	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S57804.01 (continued)
Sample Tag: MWBP-10A-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 14:32	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 20:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 20:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 20:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 20:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 20:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-27-4	
Methyl cyclohexane	32	ug/L	1	SW8260B	08/28/13 20:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	79-34-5	
Ethylbenzene	7	ug/L	1	SW8260B	08/28/13 20:44	WAT	100-41-4	
p,m-Xylene	11	ug/L	2	SW8260B	08/28/13 20:44	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	100-42-5	
Isopropylbenzene	2	ug/L	1	SW8260B	08/28/13 20:44	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	120-82-1	

Lab Sample ID: S57804.01 (continued)
Sample Tag: MWBP-10A-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 20:44	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57804.02
Sample Tag: MWBP-11-UST1-4
Collected Date/Time: 08/23/2013 14:17
Matrix: Groundwater
COC Reference: 75486

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR
2	1L Amber	None	Yes	4.7	IR
1	125ml Plastic	HNO3	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 15:49	PER	7440-36-0	
Arsenic	0.019	mg/L	0.002	SW6020	09/10/13 15:49	PER	7440-38-2	
Barium	0.013	mg/L	0.005	SW6020	09/10/13 15:49	PER	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020	09/10/13 15:49	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 15:49	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 15:49	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 15:49	PER	7440-48-4	
Copper	0.011	mg/L	0.005	SW6020	09/10/13 15:49	PER	7440-50-8	
Lead	0.003	mg/L	0.003	SW6020	09/10/13 15:49	PER	7439-92-1	
Manganese	0.021	mg/L	0.005	SW6020	09/10/13 15:49	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:54	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020	09/10/13 15:49	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 15:49	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 15:49	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/10/13 15:49	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/10/13 15:49	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	91-58-7	

Lab Sample ID: S57804.02 (continued)
Sample Tag: MWBP-11-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/05/13 17:24	PL	53-70-3	
Dibenzofuran	1	ug/L	1	SW8270C	09/05/13 17:24	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/05/13 17:24	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	86-30-6	
Naphthalene	1	ug/L	1	SW8270C	09/05/13 17:24	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	87-86-5	
Phenanthrene	3	ug/L	1	SW8270C	09/05/13 17:24	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/05/13 17:24	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S57804.02 (continued)
Sample Tag: MWBP-11-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 19:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 21:04	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 21:04	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 21:04	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 21:04	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 21:04	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	79-34-5	
Ethylbenzene	1	ug/L	1	SW8260B	08/28/13 21:04	WAT	100-41-4	
p,m-Xylene	4	ug/L	2	SW8260B	08/28/13 21:04	WAT		
o-Xylene	2	ug/L	1	SW8260B	08/28/13 21:04	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	120-82-1	

Lab Sample ID: S57804.02 (continued)
Sample Tag: MWBP-11-UST1-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 21:04	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75486

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lance Rogers
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8857
E-MAIL ADDRESS: LanceRogers@Arcadisus.com
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME ☐ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: Plant 6 / B0064481.2013.00003
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Alex Villarreal

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs, 1,4 dioxane SIMS	TCL SVOCs	TAL metals
57804.01	8/23	12:08	MWBP-10A-UST 1-4	GW	6	2	3	1					X	X	X
.02	"	14:17	MWBP-11-UST 1-4	GW	6	2	3	1					X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☐ Sampler DATE 8/23 TIME 15:00
RECEIVED BY: SIGNATURE/ORGANIZATION Cliff Watts DATE 8/23 TIME 15:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION Cliff Watts DATE 8/23 TIME 16:30
RECEIVED BY: SIGNATURE/ORGANIZATION Merit DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tabatha Lee DATE 8/23/13 TIME 1628

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57805.01(01)
Generated on 09/11/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57805.01-S57805.06
Project: RACER LANSING PLANT-6
Collected Date: 08/23/2013
Submitted Date/Time: 08/23/2013 16:30
Sampled by: Billy J Coben
P.O. #: B0064481.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57805.01	MW-BP-10-UST-1-4(08232013)	Groundwater	08/23/2013 08:40
S57805.02	UNK-03 (08232013)	Groundwater	08/23/2013 10:35
S57805.03	UNK-03 (08232013) MS	Groundwater	08/23/2013 10:35
S57805.04	UNK-03 (08232013) MSD	Groundwater	08/23/2013 10:35
S57805.05	DUP-09 (08232013)	Groundwater	08/23/2013 00:01
S57805.06	TRIP BLANK(08232013)	Groundwater	08/23/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57805.01
Sample Tag: MW-BP-10-UST-1-4(08232013)
Collected Date/Time: 08/23/2013 08:40
Matrix: Groundwater
COC Reference: 75370

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
BNA Extraction (Replicate 01)	Completed			3510C	09/06/13 14:46	EMR		H
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/30/13 09:50	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 16:01	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 15:59	PER	7440-36-0	
Arsenic, Dissolved	0.049	mg/L	0.002	SW6020	09/10/13 16:01	PER	7440-38-2	
Arsenic	0.062	mg/L	0.002	SW6020	09/10/13 15:59	PER	7440-38-2	
Barium, Dissolved	0.093	mg/L	0.005	SW6020	09/10/13 16:01	PER	7440-39-3	
Barium	0.112	mg/L	0.005	SW6020	09/10/13 15:59	PER	7440-39-3	
Boron, Dissolved	0.11	mg/L	0.04	SW6020	09/10/13 16:01	PER	7440-42-8	
Boron	0.11	mg/L	0.04	SW6020	09/10/13 15:59	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 16:01	PER	7440-43-9	
Cadmium	0.0006	mg/L	0.0005	SW6020	09/10/13 15:59	PER	7440-43-9	
Chromium, Dissolved	0.011	mg/L	0.005	SW6020	09/10/13 16:01	PER	7440-47-3	
Chromium	0.011	mg/L	0.005	SW6020	09/10/13 15:59	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 16:01	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 15:59	PER	7440-48-4	
Copper, Dissolved	0.008	mg/L	0.005	SW6020	09/10/13 16:01	PER	7440-50-8	
Copper	0.009	mg/L	0.005	SW6020	09/10/13 15:59	PER	7440-50-8	
Lead, Dissolved	0.004	mg/L	0.003	SW6020	09/10/13 16:01	PER	7439-92-1	
Lead	0.005	mg/L	0.003	SW6020	09/10/13 15:59	PER	7439-92-1	
Manganese, Dissolved	0.101	mg/L	0.005	SW6020	09/10/13 16:01	PER	7439-96-5	
Manganese	0.111	mg/L	0.005	SW6020	09/10/13 15:59	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:58	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 15:56	CCM	7439-97-6	
Nickel, Dissolved	0.009	mg/L	0.005	SW6020	09/10/13 16:01	PER	7440-02-0	
Nickel	0.011	mg/L	0.005	SW6020	09/10/13 15:59	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 16:01	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 15:59	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 16:01	PER	7440-22-4	
Silver	0.0006	mg/L	0.0005	SW6020	09/10/13 15:59	PER	7440-22-4	
Vanadium, Dissolved	0.069	mg/L	0.005	SW6020	09/10/13 16:01	PER	7440-62-2	
Vanadium	0.072	mg/L	0.005	SW6020	09/10/13 15:59	PER	7440-62-2	
Zinc, Dissolved	0.102	mg/L	0.005	SW6020	09/10/13 16:01	PER	7440-66-6	

H-Sample submitted and run outside of holding time

Lab Sample ID: S57805.01 (continued)
Sample Tag: MW-BP-10-UST-1-4(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Zinc	0.145	mg/L	0.005	SW6020	09/10/13 15:59	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	83-32-9	S
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	208-96-8	S
Acetophenone	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	98-86-2	S
Anthracene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	120-12-7	S
Atrazine	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	1912-24-9	S
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	92-52-4	S
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	101-55-3	S
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	84-74-2	S
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	100-52-7	S
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	56-55-3	S
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	50-32-8	S
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	205-99-2	S
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	191-24-2	S
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	207-08-9	S
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	85-68-7	S
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	91-58-7	S
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	95-57-8	S
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	59-50-7	S
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	106-47-8	S
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	7005-72-3	S
Caprolactam	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	105-60-2	S
Carbazole	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	86-74-8	S
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	111-91-1	S
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	111-44-4	S
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	108-60-1	S
Chrysene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	218-01-9	S
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	120-83-2	S
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	105-67-9	S
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	51-28-5	S
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	121-14-2	S
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	606-20-2	S
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	534-52-1	S
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/05/13 17:58	PL	53-70-3	S
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	132-64-9	S
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	84-66-2	S
Dimethyl phthalate	17	ug/L	1	SW8270C	09/05/13 17:58	PL	131-11-3	BS
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	117-81-7	S
Fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	206-44-0	S
Fluorene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	86-73-7	S
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	87-68-3	S
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	77-47-4	S
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	67-72-1	S
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	193-39-5	S
Isophorone	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	78-59-1	S

S-Surrogate recovery outside of control limits
B-Compound also found in associated method blank

Lab Sample ID: S57805.01 (continued)
Sample Tag: MW-BP-10-UST-1-4(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	91-57-6	S
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	95-48-7	S
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	3/4-Cresol	S
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	88-74-4	S
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	88-75-5	S
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	99-09-2	S
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	100-01-6	S
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	100-02-7	S
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	621-64-7	S
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	86-30-6	S
Naphthalene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	91-20-3	S
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	98-95-3	S
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	117-84-0	S
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	87-86-5	S
Phenanthrene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	85-01-8	S
Phenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	108-95-2	S
Pyrene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	129-00-0	S
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	95-95-4	S
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	88-06-2	S
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/05/13 17:58	PL	118-74-1	S
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	83-32-9	G
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	208-96-8	G
Acetophenone	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	98-86-2	G
Anthracene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	120-12-7	G
Atrazine	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	1912-24-9	G
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	92-52-4	G
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	101-55-3	G
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	84-74-2	G
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	100-52-7	G
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	56-55-3	G
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	50-32-8	G
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	205-99-2	G
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	191-24-2	G
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	207-08-9	G
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	85-68-7	G
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	91-58-7	G
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	95-57-8	G
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	59-50-7	G
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	106-47-8	G
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	7005-72-3	G
Caprolactam	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	105-60-2	G
Carbazole	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	86-74-8	G
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	111-91-1	G
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	111-44-4	G
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	108-60-1	G

S-Surrogate recovery outside of control limits
G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S57805.01 (continued)
Sample Tag: MW-BP-10-UST-1-4(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
Chrysene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	218-01-9	G
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	120-83-2	G
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	105-67-9	G
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	51-28-5	G
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	121-14-2	G
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	606-20-2	G
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	534-52-1	G
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/07/13 20:39	PL	53-70-3	G
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	132-64-9	G
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	84-66-2	G
Dimethyl phthalate	31	ug/L	1	SW8270C	09/07/13 20:39	PL	131-11-3	BG
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	09/07/13 20:39	PL	117-81-7	G
Fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	206-44-0	G
Fluorene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	86-73-7	G
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	87-68-3	G
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	77-47-4	G
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	67-72-1	G
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	193-39-5	G
Isophorone	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	78-59-1	G
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	91-57-6	G
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	95-48-7	G
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	3/4-Cresol	G
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	88-74-4	G
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	88-75-5	G
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	99-09-2	G
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	100-01-6	G
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	100-02-7	G
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	621-64-7	G
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	86-30-6	G
Naphthalene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	91-20-3	G
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	98-95-3	G
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	117-84-0	G
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	87-86-5	G
Phenanthrene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	85-01-8	G
Phenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	108-95-2	G
Pyrene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	129-00-0	G
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	95-95-4	G
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	88-06-2	G
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/07/13 20:39	PL	118-74-1	G
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 14:50	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/29/13 17:45	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-15-0	

G-Estimated result due to extraction run outside of holding time
B-Compound also found in associated method blank

Lab Sample ID: S57805.01 (continued)
Sample Tag: MW-BP-10-UST-1-4(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 17:45	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/29/13 17:45	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 17:45	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/29/13 17:45	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/29/13 17:45	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 17:45	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57805.02
Sample Tag: UNK-03 (08232013)
Collected Date/Time: 08/23/2013 10:35
Matrix: Groundwater
COC Reference: 75370

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/30/13 09:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 16:05	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	09/10/13 16:05	PER	7440-38-2	
Barium	0.052	mg/L	0.005	SW6020	09/10/13 16:05	PER	7440-39-3	
Boron	0.14	mg/L	0.04	SW6020	09/10/13 16:05	PER	7440-42-8	
Cadmium	0.0008	mg/L	0.0005	SW6020	09/10/13 16:05	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 16:05	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 16:05	PER	7440-48-4	
Copper	0.007	mg/L	0.005	SW6020	09/10/13 16:05	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 16:05	PER	7439-92-1	
Manganese	0.523	mg/L	0.005	SW6020	09/10/13 16:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 16:04	CCM	7439-97-6	
Nickel	0.011	mg/L	0.005	SW6020	09/10/13 16:05	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 16:05	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 16:05	PER	7440-22-4	
Vanadium	0.007	mg/L	0.005	SW6020	09/10/13 16:05	PER	7440-62-2	
Zinc	0.009	mg/L	0.005	SW6020	09/10/13 16:05	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	91-58-7	

Lab Sample ID: S57805.02 (continued)
Sample Tag: UNK-03 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/05/13 18:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	09/05/13 18:33	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/05/13 18:33	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S57805.02 (continued)
Sample Tag: UNK-03 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 15:09	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/29/13 15:19	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 15:19	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/29/13 15:19	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 15:19	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/29/13 15:19	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/29/13 15:19	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	120-82-1	

Lab Sample ID: S57805.02 (continued)
Sample Tag: UNK-03 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 15:19	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57805.03
Sample Tag: UNK-03 (08232013) MS
Collected Date/Time: 08/23/2013 10:35
Matrix: Groundwater
COC Reference: 75370

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/30/13 09:50	LBR		
Metals								
Antimony	0.269	mg/L	0.005	SW6020	09/10/13 16:09	PER	7440-36-0	
Arsenic	0.265	mg/L	0.002	SW6020	09/10/13 16:09	PER	7440-38-2	
Barium	0.323	mg/L	0.005	SW6020	09/10/13 16:09	PER	7440-39-3	
Boron	0.41	mg/L	0.04	SW6020	09/10/13 16:09	PER	7440-42-8	
Cadmium	0.269	mg/L	0.0005	SW6020	09/10/13 16:09	PER	7440-43-9	
Chromium	0.261	mg/L	0.005	SW6020	09/10/13 16:09	PER	7440-47-3	
Cobalt	0.260	mg/L	0.005	SW6020	09/10/13 16:09	PER	7440-48-4	
Copper	0.254	mg/L	0.005	SW6020	09/10/13 16:09	PER	7440-50-8	
Lead	0.245	mg/L	0.003	SW6020	09/10/13 16:09	PER	7439-92-1	
Manganese	0.776	mg/L	0.005	SW6020	09/10/13 16:09	PER	7439-96-5	
Mercury	0.0019	mg/L	0.0001	SW7471A	08/27/13 16:06	CCM	7439-97-6	
Nickel	0.270	mg/L	0.005	SW6020	09/10/13 16:09	PER	7440-02-0	
Selenium	0.277	mg/L	0.005	SW6020	09/10/13 16:09	PER	7782-49-2	
Silver	0.238	mg/L	0.0005	SW6020	09/10/13 16:09	PER	7440-22-4	
Vanadium	0.279	mg/L	0.005	SW6020	09/10/13 16:09	PER	7440-62-2	
Zinc	0.264	mg/L	0.005	SW6020	09/10/13 16:09	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	33	ug/L	1	SW8270C	09/05/13 19:07	PL	83-32-9	1
Acenaphthylene	38	ug/L	1	SW8270C	09/05/13 19:07	PL	208-96-8	1
Acetophenone	28	ug/L	1	SW8270C	09/05/13 19:07	PL	98-86-2	1
Anthracene	37	ug/L	1	SW8270C	09/05/13 19:07	PL	120-12-7	1
Atrazine	35	ug/L	1	SW8270C	09/05/13 19:07	PL	1912-24-9	1
1,1'-Biphenyl	31	ug/L	1	SW8270C	09/05/13 19:07	PL	92-52-4	1
4-Bromophenyl phenyl ether	34	ug/L	1	SW8270C	09/05/13 19:07	PL	101-55-3	1
di-n-Butyl phthalate	38	ug/L	1	SW8270C	09/05/13 19:07	PL	84-74-2	1
Benzaldehyde	25	ug/L	1	SW8270C	09/05/13 19:07	PL	100-52-7	1
Benzo(a)anthracene	37	ug/L	1	SW8270C	09/05/13 19:07	PL	56-55-3	1
Benzo(a)pyrene	37	ug/L	1	SW8270C	09/05/13 19:07	PL	50-32-8	1
Benzo(b)fluoranthene	35	ug/L	1	SW8270C	09/05/13 19:07	PL	205-99-2	1
Benzo(ghi)perylene	39	ug/L	1	SW8270C	09/05/13 19:07	PL	191-24-2	1
Benzo(k)fluoranthene	35	ug/L	1	SW8270C	09/05/13 19:07	PL	207-08-9	1
Butyl benzyl phthalate	37	ug/L	1	SW8270C	09/05/13 19:07	PL	85-68-7	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57805.03 (continued)
Sample Tag: UNK-03 (08232013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	30	ug/L	1	SW8270C	09/05/13 19:07	PL	91-58-7	1
2-Chlorophenol	29	ug/L	1	SW8270C	09/05/13 19:07	PL	95-57-8	1
4-Chloro-3-methylphenol	36	ug/L	1	SW8270C	09/05/13 19:07	PL	59-50-7	1
4-Chloroaniline	11	ug/L	1	SW8270C	09/05/13 19:07	PL	106-47-8	1
4-Chlorophenyl phenyl ether	34	ug/L	1	SW8270C	09/05/13 19:07	PL	7005-72-3	1
Caprolactam	5	ug/L	1	SW8270C	09/05/13 19:07	PL	105-60-2	1
Carbazole	36	ug/L	1	SW8270C	09/05/13 19:07	PL	86-74-8	1
bis(2-Chloroethoxy)methane	29	ug/L	1	SW8270C	09/05/13 19:07	PL	111-91-1	1
bis(2-Chloroethyl)ether	26	ug/L	1	SW8270C	09/05/13 19:07	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	25	ug/L	1	SW8270C	09/05/13 19:07	PL	108-60-1	1
Chrysene	38	ug/L	1	SW8270C	09/05/13 19:07	PL	218-01-9	1
2,4-Dichlorophenol	34	ug/L	1	SW8270C	09/05/13 19:07	PL	120-83-2	1
2,4-Dimethylphenol	34	ug/L	1	SW8270C	09/05/13 19:07	PL	105-67-9	1
2,4-Dinitrophenol	26	ug/L	1	SW8270C	09/05/13 19:07	PL	51-28-5	1
2,4-Dinitrotoluene	36	ug/L	1	SW8270C	09/05/13 19:07	PL	121-14-2	1
2,6-Dinitrotoluene	36	ug/L	1	SW8270C	09/05/13 19:07	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	36	ug/L	1	SW8270C	09/05/13 19:07	PL	534-52-1	1
Dibenzo(ah)anthracene	49	ug/L	2	SW8270C	09/05/13 19:07	PL	53-70-3	1
Dibenzofuran	34	ug/L	1	SW8270C	09/05/13 19:07	PL	132-64-9	1
Diethyl phthalate	37	ug/L	1	SW8270C	09/05/13 19:07	PL	84-66-2	1
Dimethyl phthalate	41	ug/L	1	SW8270C	09/05/13 19:07	PL	131-11-3	1B
bis(2-Ethylhexyl)phthalate	41	ug/L	1	SW8270C	09/05/13 19:07	PL	117-81-7	1
Fluoranthene	37	ug/L	1	SW8270C	09/05/13 19:07	PL	206-44-0	1
Fluorene	35	ug/L	1	SW8270C	09/05/13 19:07	PL	86-73-7	1
Hexachlorobutadiene	26	ug/L	1	SW8270C	09/05/13 19:07	PL	87-68-3	1
Hexachlorocyclopentadiene	32	ug/L	1	SW8270C	09/05/13 19:07	PL	77-47-4	1
Hexachloroethane	22	ug/L	1	SW8270C	09/05/13 19:07	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	46	ug/L	1	SW8270C	09/05/13 19:07	PL	193-39-5	1
Isophorone	39	ug/L	1	SW8270C	09/05/13 19:07	PL	78-59-1	1
2-Methylnaphthalene	32	ug/L	1	SW8270C	09/05/13 19:07	PL	91-57-6	1
2-Methylphenol	30	ug/L	1	SW8270C	09/05/13 19:07	PL	95-48-7	1
3-, 4-Methylphenol	33	ug/L	1	SW8270C	09/05/13 19:07	PL	3/4-Cresol	1
2-Nitroaniline	36	ug/L	1	SW8270C	09/05/13 19:07	PL	88-74-4	1
2-Nitrophenol	30	ug/L	1	SW8270C	09/05/13 19:07	PL	88-75-5	1
3-Nitroaniline	31	ug/L	1	SW8270C	09/05/13 19:07	PL	99-09-2	1
4-Nitroaniline	34	ug/L	1	SW8270C	09/05/13 19:07	PL	100-01-6	1
4-Nitrophenol	31	ug/L	1	SW8270C	09/05/13 19:07	PL	100-02-7	1
N-Nitrosodi-n-propylamine	29	ug/L	1	SW8270C	09/05/13 19:07	PL	621-64-7	1
N-Nitrosodiphenylamine	35	ug/L	1	SW8270C	09/05/13 19:07	PL	86-30-6	1
Naphthalene	29	ug/L	1	SW8270C	09/05/13 19:07	PL	91-20-3	1
Nitrobenzene	28	ug/L	1	SW8270C	09/05/13 19:07	PL	98-95-3	1
di-n-Octyl phthalate	45	ug/L	1	SW8270C	09/05/13 19:07	PL	117-84-0	1
Pentachlorophenol	33	ug/L	1	SW8270C	09/05/13 19:07	PL	87-86-5	1
Phenanthrene	36	ug/L	1	SW8270C	09/05/13 19:07	PL	85-01-8	1
Phenol	19	ug/L	1	SW8270C	09/05/13 19:07	PL	108-95-2	1
Pyrene	36	ug/L	1	SW8270C	09/05/13 19:07	PL	129-00-0	1
2,4,5-Trichlorophenol	40	ug/L	1	SW8270C	09/05/13 19:07	PL	95-95-4	1

1-Sample spiked at 50 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S57805.03 (continued)
Sample Tag: UNK-03 (08232013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	32	ug/L	1	SW8270C	09/05/13 19:07	PL	88-06-2	1
Hexachlorobenzene	34	ug/L	1	SW8270C	09/05/13 19:07	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	49	ug/L	5	SW8260B - SIM	08/29/13 17:35	JGH	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	51	ug/L	1	SW8260B	08/29/13 13:14	JGH	76-13-1	2
Acetone	42	ug/L	10	SW8260B	08/29/13 13:14	JGH	67-64-1	2
Carbon disulfide	53	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-15-0	2
Methyl Acetate	49	ug/L	10	SW8260B	08/29/13 13:14	JGH	79-20-9	2
tert-Methyl butyl ether (MTBE)	55	ug/L	1	SW8260B	08/29/13 13:14	JGH	1634-04-4	2
2-Butanone (MEK)	47	ug/L	10	SW8260B	08/29/13 13:14	JGH	78-93-3	2
Dichlorodifluoromethane	39	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-71-8	2
Chloromethane	42	ug/L	1	SW8260B	08/29/13 13:14	JGH	74-87-3	2
Vinyl chloride	43	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-01-4	2
Bromomethane	54	ug/L	1	SW8260B	08/29/13 13:14	JGH	74-83-9	2
Chloroethane	54	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-00-3	2
Trichlorofluoromethane	56	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-69-4	2
1,1-Dichloroethene	49	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-35-4	2
Methylene chloride	48	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	156-60-5	2
1,1-Dichloroethane	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-34-3	2
cis-1,2-Dichloroethene	51	ug/L	1	SW8260B	08/29/13 13:14	JGH	156-59-2	2
Chloroform	53	ug/L	1	SW8260B	08/29/13 13:14	JGH	67-66-3	2
1,1,1-Trichloroethane	57	ug/L	1	SW8260B	08/29/13 13:14	JGH	71-55-6	2
Cyclohexane	46	ug/L	1	SW8260B	08/29/13 13:14	JGH	110-82-7	2
4-Methyl-2-pentanone (MIBK)	53	ug/L	10	SW8260B	08/29/13 13:14	JGH	108-10-1	2
2-Hexanone	53	ug/L	10	SW8260B	08/29/13 13:14	JGH	591-78-6	2
Carbon tetrachloride	59	ug/L	1	SW8260B	08/29/13 13:14	JGH	56-23-5	2
Benzene	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	71-43-2	2
1,2-Dichloroethane	54	ug/L	1	SW8260B	08/29/13 13:14	JGH	107-06-2	2
Trichloroethene	52	ug/L	1	SW8260B	08/29/13 13:14	JGH	79-01-6	2
1,2-Dichloropropane	51	ug/L	1	SW8260B	08/29/13 13:14	JGH	78-87-5	2
Bromodichloromethane	59	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-27-4	2
Methyl cyclohexane	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	108-87-2	2
cis-1,3-Dichloropropene	55	ug/L	1	SW8260B	08/29/13 13:14	JGH	10061-01-5	2
Toluene	52	ug/L	1	SW8260B	08/29/13 13:14	JGH	108-88-3	2
trans-1,3-Dichloropropene	56	ug/L	1	SW8260B	08/29/13 13:14	JGH	10061-02-6	2
1,1,2-Trichloroethane	53	ug/L	1	SW8260B	08/29/13 13:14	JGH	79-00-5	2
Tetrachloroethene	52	ug/L	1	SW8260B	08/29/13 13:14	JGH	127-18-4	2
Dibromochloromethane	52	ug/L	1	SW8260B	08/29/13 13:14	JGH	124-48-1	2
Chlorobenzene	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	108-90-7	2
1,1,2,2-Tetrachloroethane	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	79-34-5	2
Ethylbenzene	51	ug/L	1	SW8260B	08/29/13 13:14	JGH	100-41-4	2
p,m-Xylene	97	ug/L	2	SW8260B	08/29/13 13:14	JGH		2
o-Xylene	52	ug/L	1	SW8260B	08/29/13 13:14	JGH	95-47-6	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/L

Lab Sample ID: S57805.03 (continued)
Sample Tag: UNK-03 (08232013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	49	ug/L	1	SW8260B	08/29/13 13:14	JGH	100-42-5	1
Isopropylbenzene	51	ug/L	1	SW8260B	08/29/13 13:14	JGH	98-82-8	1
Bromoform	51	ug/L	1	SW8260B	08/29/13 13:14	JGH	75-25-2	1
1,3-Dichlorobenzene	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	541-73-1	1
1,4-Dichlorobenzene	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	106-46-7	1
1,2-Dichlorobenzene	50	ug/L	1	SW8260B	08/29/13 13:14	JGH	95-50-1	1
1,2,4-Trichlorobenzene	48	ug/L	1	SW8260B	08/29/13 13:14	JGH	120-82-1	1
1,2-Dibromoethane	52	ug/L	1	SW8260B	08/29/13 13:14	JGH	106-93-4	1
1,2-Dibromo-3-chloropropane	46	ug/L	1	SW8260B	08/29/13 13:14	JGH	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57805.04
Sample Tag: UNK-03 (08232013) MSD
Collected Date/Time: 08/23/2013 10:35
Matrix: Groundwater
COC Reference: 75370

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/30/13 09:50	LBR		
Metals								
Antimony	0.274	mg/L	0.005	SW6020	09/10/13 16:14	PER	7440-36-0	
Arsenic	0.271	mg/L	0.002	SW6020	09/10/13 16:14	PER	7440-38-2	
Barium	0.323	mg/L	0.005	SW6020	09/10/13 16:14	PER	7440-39-3	
Boron	0.43	mg/L	0.04	SW6020	09/10/13 16:14	PER	7440-42-8	
Cadmium	0.268	mg/L	0.0005	SW6020	09/10/13 16:14	PER	7440-43-9	
Chromium	0.262	mg/L	0.005	SW6020	09/10/13 16:14	PER	7440-47-3	
Cobalt	0.261	mg/L	0.005	SW6020	09/10/13 16:14	PER	7440-48-4	
Copper	0.255	mg/L	0.005	SW6020	09/10/13 16:14	PER	7440-50-8	
Lead	0.245	mg/L	0.003	SW6020	09/10/13 16:14	PER	7439-92-1	
Manganese	0.785	mg/L	0.005	SW6020	09/10/13 16:14	PER	7439-96-5	
Mercury	0.0019	mg/L	0.0001	SW7471A	08/27/13 16:08	CCM	7439-97-6	
Nickel	0.266	mg/L	0.005	SW6020	09/10/13 16:14	PER	7440-02-0	
Selenium	0.279	mg/L	0.005	SW6020	09/10/13 16:14	PER	7782-49-2	
Silver	0.235	mg/L	0.0005	SW6020	09/10/13 16:14	PER	7440-22-4	
Vanadium	0.278	mg/L	0.005	SW6020	09/10/13 16:14	PER	7440-62-2	
Zinc	0.263	mg/L	0.005	SW6020	09/10/13 16:14	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	36	ug/L	1	SW8270C	09/05/13 19:41	PL	83-32-9	1
Acenaphthylene	41	ug/L	1	SW8270C	09/05/13 19:41	PL	208-96-8	1
Acetophenone	32	ug/L	1	SW8270C	09/05/13 19:41	PL	98-86-2	1
Anthracene	37	ug/L	1	SW8270C	09/05/13 19:41	PL	120-12-7	1
Atrazine	36	ug/L	1	SW8270C	09/05/13 19:41	PL	1912-24-9	1
1,1'-Biphenyl	35	ug/L	1	SW8270C	09/05/13 19:41	PL	92-52-4	1
4-Bromophenyl phenyl ether	35	ug/L	1	SW8270C	09/05/13 19:41	PL	101-55-3	1
di-n-Butyl phthalate	39	ug/L	1	SW8270C	09/05/13 19:41	PL	84-74-2	1
Benzaldehyde	29	ug/L	1	SW8270C	09/05/13 19:41	PL	100-52-7	1
Benzo(a)anthracene	38	ug/L	1	SW8270C	09/05/13 19:41	PL	56-55-3	1
Benzo(a)pyrene	39	ug/L	1	SW8270C	09/05/13 19:41	PL	50-32-8	1
Benzo(b)fluoranthene	37	ug/L	1	SW8270C	09/05/13 19:41	PL	205-99-2	1
Benzo(ghi)perylene	39	ug/L	1	SW8270C	09/05/13 19:41	PL	191-24-2	1
Benzo(k)fluoranthene	37	ug/L	1	SW8270C	09/05/13 19:41	PL	207-08-9	1
Butyl benzyl phthalate	39	ug/L	1	SW8270C	09/05/13 19:41	PL	85-68-7	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57805.04 (continued)
Sample Tag: UNK-03 (08232013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	33	ug/L	1	SW8270C	09/05/13 19:41	PL	91-58-7	1
2-Chlorophenol	32	ug/L	1	SW8270C	09/05/13 19:41	PL	95-57-8	1
4-Chloro-3-methylphenol	39	ug/L	1	SW8270C	09/05/13 19:41	PL	59-50-7	1
4-Chloroaniline	12	ug/L	1	SW8270C	09/05/13 19:41	PL	106-47-8	1
4-Chlorophenyl phenyl ether	36	ug/L	1	SW8270C	09/05/13 19:41	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270C	09/05/13 19:41	PL	105-60-2	1
Carbazole	37	ug/L	1	SW8270C	09/05/13 19:41	PL	86-74-8	1
bis(2-Chloroethoxy)methane	32	ug/L	1	SW8270C	09/05/13 19:41	PL	111-91-1	1
bis(2-Chloroethyl)ether	29	ug/L	1	SW8270C	09/05/13 19:41	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	29	ug/L	1	SW8270C	09/05/13 19:41	PL	108-60-1	1
Chrysene	39	ug/L	1	SW8270C	09/05/13 19:41	PL	218-01-9	1
2,4-Dichlorophenol	36	ug/L	1	SW8270C	09/05/13 19:41	PL	120-83-2	1
2,4-Dimethylphenol	38	ug/L	1	SW8270C	09/05/13 19:41	PL	105-67-9	1
2,4-Dinitrophenol	31	ug/L	1	SW8270C	09/05/13 19:41	PL	51-28-5	1
2,4-Dinitrotoluene	38	ug/L	1	SW8270C	09/05/13 19:41	PL	121-14-2	1
2,6-Dinitrotoluene	38	ug/L	1	SW8270C	09/05/13 19:41	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	37	ug/L	1	SW8270C	09/05/13 19:41	PL	534-52-1	1
Dibenzo(ah)anthracene	50	ug/L	2	SW8270C	09/05/13 19:41	PL	53-70-3	1
Dibenzofuran	36	ug/L	1	SW8270C	09/05/13 19:41	PL	132-64-9	1
Diethyl phthalate	39	ug/L	1	SW8270C	09/05/13 19:41	PL	84-66-2	1
Dimethyl phthalate	48	ug/L	1	SW8270C	09/05/13 19:41	PL	131-11-3	1B
bis(2-Ethylhexyl)phthalate	43	ug/L	1	SW8270C	09/05/13 19:41	PL	117-81-7	1
Fluoranthene	38	ug/L	1	SW8270C	09/05/13 19:41	PL	206-44-0	1
Fluorene	38	ug/L	1	SW8270C	09/05/13 19:41	PL	86-73-7	1
Hexachlorobutadiene	27	ug/L	1	SW8270C	09/05/13 19:41	PL	87-68-3	1
Hexachlorocyclopentadiene	37	ug/L	1	SW8270C	09/05/13 19:41	PL	77-47-4	1
Hexachloroethane	23	ug/L	1	SW8270C	09/05/13 19:41	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	46	ug/L	1	SW8270C	09/05/13 19:41	PL	193-39-5	1
Isophorone	44	ug/L	1	SW8270C	09/05/13 19:41	PL	78-59-1	1
2-Methylnaphthalene	35	ug/L	1	SW8270C	09/05/13 19:41	PL	91-57-6	1
2-Methylphenol	34	ug/L	1	SW8270C	09/05/13 19:41	PL	95-48-7	1
3-, 4-Methylphenol	37	ug/L	1	SW8270C	09/05/13 19:41	PL	3/4-Cresol	1
2-Nitroaniline	38	ug/L	1	SW8270C	09/05/13 19:41	PL	88-74-4	1
2-Nitrophenol	34	ug/L	1	SW8270C	09/05/13 19:41	PL	88-75-5	1
3-Nitroaniline	30	ug/L	1	SW8270C	09/05/13 19:41	PL	99-09-2	1
4-Nitroaniline	34	ug/L	1	SW8270C	09/05/13 19:41	PL	100-01-6	1
4-Nitrophenol	31	ug/L	1	SW8270C	09/05/13 19:41	PL	100-02-7	1
N-Nitrosodi-n-propylamine	33	ug/L	1	SW8270C	09/05/13 19:41	PL	621-64-7	1
N-Nitrosodiphenylamine	36	ug/L	1	SW8270C	09/05/13 19:41	PL	86-30-6	1
Naphthalene	33	ug/L	1	SW8270C	09/05/13 19:41	PL	91-20-3	1
Nitrobenzene	32	ug/L	1	SW8270C	09/05/13 19:41	PL	98-95-3	1
di-n-Octyl phthalate	48	ug/L	1	SW8270C	09/05/13 19:41	PL	117-84-0	1
Pentachlorophenol	36	ug/L	1	SW8270C	09/05/13 19:41	PL	87-86-5	1
Phenanthrene	37	ug/L	1	SW8270C	09/05/13 19:41	PL	85-01-8	1
Phenol	21	ug/L	1	SW8270C	09/05/13 19:41	PL	108-95-2	1
Pyrene	37	ug/L	1	SW8270C	09/05/13 19:41	PL	129-00-0	1
2,4,5-Trichlorophenol	43	ug/L	1	SW8270C	09/05/13 19:41	PL	95-95-4	1

1-Sample spiked at 50 mg/l
B-Compound also found in associated method blank

Lab Sample ID: S57805.04 (continued)
Sample Tag: UNK-03 (08232013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2,4,6-Trichlorophenol	34	ug/L	1	SW8270C	09/05/13 19:41	PL	88-06-2	1
Hexachlorobenzene	35	ug/L	1	SW8270C	09/05/13 19:41	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	49	ug/L	5	SW8260B - SIM	08/29/13 17:53	JGH	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	53	ug/L	1	SW8260B	08/29/13 13:35	JGH	76-13-1	2
Acetone	40	ug/L	10	SW8260B	08/29/13 13:35	JGH	67-64-1	2
Carbon disulfide	55	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-15-0	2
Methyl Acetate	50	ug/L	10	SW8260B	08/29/13 13:35	JGH	79-20-9	2
tert-Methyl butyl ether (MTBE)	56	ug/L	1	SW8260B	08/29/13 13:35	JGH	1634-04-4	2
2-Butanone (MEK)	48	ug/L	10	SW8260B	08/29/13 13:35	JGH	78-93-3	2
Dichlorodifluoromethane	41	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-71-8	2
Chloromethane	44	ug/L	1	SW8260B	08/29/13 13:35	JGH	74-87-3	2
Vinyl chloride	45	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-01-4	2
Bromomethane	58	ug/L	1	SW8260B	08/29/13 13:35	JGH	74-83-9	2
Chloroethane	61	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-00-3	2
Trichlorofluoromethane	57	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-69-4	2
1,1-Dichloroethene	51	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-35-4	2
Methylene chloride	50	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-09-2	2
trans-1,2-Dichloroethene	51	ug/L	1	SW8260B	08/29/13 13:35	JGH	156-60-5	2
1,1-Dichloroethane	51	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-34-3	2
cis-1,2-Dichloroethene	52	ug/L	1	SW8260B	08/29/13 13:35	JGH	156-59-2	2
Chloroform	54	ug/L	1	SW8260B	08/29/13 13:35	JGH	67-66-3	2
1,1,1-Trichloroethane	58	ug/L	1	SW8260B	08/29/13 13:35	JGH	71-55-6	2
Cyclohexane	47	ug/L	1	SW8260B	08/29/13 13:35	JGH	110-82-7	2
4-Methyl-2-pentanone (MIBK)	54	ug/L	10	SW8260B	08/29/13 13:35	JGH	108-10-1	2
2-Hexanone	53	ug/L	10	SW8260B	08/29/13 13:35	JGH	591-78-6	2
Carbon tetrachloride	60	ug/L	1	SW8260B	08/29/13 13:35	JGH	56-23-5	2
Benzene	50	ug/L	1	SW8260B	08/29/13 13:35	JGH	71-43-2	2
1,2-Dichloroethane	54	ug/L	1	SW8260B	08/29/13 13:35	JGH	107-06-2	2
Trichloroethene	53	ug/L	1	SW8260B	08/29/13 13:35	JGH	79-01-6	2
1,2-Dichloropropane	52	ug/L	1	SW8260B	08/29/13 13:35	JGH	78-87-5	2
Bromodichloromethane	60	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-27-4	2
Methyl cyclohexane	52	ug/L	1	SW8260B	08/29/13 13:35	JGH	108-87-2	2
cis-1,3-Dichloropropene	55	ug/L	1	SW8260B	08/29/13 13:35	JGH	10061-01-5	2
Toluene	53	ug/L	1	SW8260B	08/29/13 13:35	JGH	108-88-3	2
trans-1,3-Dichloropropene	57	ug/L	1	SW8260B	08/29/13 13:35	JGH	10061-02-6	2
1,1,2-Trichloroethane	54	ug/L	1	SW8260B	08/29/13 13:35	JGH	79-00-5	2
Tetrachloroethene	53	ug/L	1	SW8260B	08/29/13 13:35	JGH	127-18-4	2
Dibromochloromethane	54	ug/L	1	SW8260B	08/29/13 13:35	JGH	124-48-1	2
Chlorobenzene	52	ug/L	1	SW8260B	08/29/13 13:35	JGH	108-90-7	2
1,1,2,2-Tetrachloroethane	52	ug/L	1	SW8260B	08/29/13 13:35	JGH	79-34-5	2
Ethylbenzene	53	ug/L	1	SW8260B	08/29/13 13:35	JGH	100-41-4	2
p,m-Xylene	101	ug/L	2	SW8260B	08/29/13 13:35	JGH		2
o-Xylene	54	ug/L	1	SW8260B	08/29/13 13:35	JGH	95-47-6	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/L

Lab Sample ID: S57805.04 (continued)
Sample Tag: UNK-03 (08232013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Styrene	51	ug/L	1	SW8260B	08/29/13 13:35	JGH	100-42-5	1
Isopropylbenzene	53	ug/L	1	SW8260B	08/29/13 13:35	JGH	98-82-8	1
Bromoform	53	ug/L	1	SW8260B	08/29/13 13:35	JGH	75-25-2	1
1,3-Dichlorobenzene	52	ug/L	1	SW8260B	08/29/13 13:35	JGH	541-73-1	1
1,4-Dichlorobenzene	52	ug/L	1	SW8260B	08/29/13 13:35	JGH	106-46-7	1
1,2-Dichlorobenzene	51	ug/L	1	SW8260B	08/29/13 13:35	JGH	95-50-1	1
1,2,4-Trichlorobenzene	47	ug/L	1	SW8260B	08/29/13 13:35	JGH	120-82-1	1
1,2-Dibromoethane	54	ug/L	1	SW8260B	08/29/13 13:35	JGH	106-93-4	1
1,2-Dibromo-3-chloropropane	46	ug/L	1	SW8260B	08/29/13 13:35	JGH	96-12-8	1

1-Spiked at 50ug/l

Lab Sample ID: S57805.05
Sample Tag: DUP-09 (08232013)
Collected Date/Time: 08/23/2013 00:01
Matrix: Groundwater
COC Reference: 75370

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
BNA Extraction (Replicate 01)	Completed			3510C	09/06/13 14:16	EMR		F
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/30/13 09:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 16:03	PER	7440-36-0	
Arsenic	0.061	mg/L	0.002	SW6020	09/10/13 16:03	PER	7440-38-2	
Barium	0.110	mg/L	0.005	SW6020	09/10/13 16:03	PER	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020	09/10/13 16:03	PER	7440-42-8	
Cadmium	0.0010	mg/L	0.0005	SW6020	09/10/13 16:03	PER	7440-43-9	
Chromium	0.012	mg/L	0.005	SW6020	09/10/13 16:03	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 16:03	PER	7440-48-4	
Copper	0.010	mg/L	0.005	SW6020	09/10/13 16:03	PER	7440-50-8	
Lead	0.005	mg/L	0.003	SW6020	09/10/13 16:03	PER	7439-92-1	
Manganese	0.113	mg/L	0.005	SW6020	09/10/13 16:03	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 16:00	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020	09/10/13 16:03	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 16:03	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 16:03	PER	7440-22-4	
Vanadium	0.073	mg/L	0.005	SW6020	09/10/13 16:03	PER	7440-62-2	
Zinc	0.148	mg/L	0.005	SW6020	09/10/13 16:03	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	83-32-9	S
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	208-96-8	S
Acetophenone	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	98-86-2	S
Anthracene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	120-12-7	S
Atrazine	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	1912-24-9	S
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	92-52-4	S
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	101-55-3	S
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	84-74-2	S
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	100-52-7	S
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	56-55-3	S
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	50-32-8	S
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	205-99-2	S
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	191-24-2	S

F-Analysis run outside of holding time
S-Surrogate recovery outside of control limits

Lab Sample ID: S57805.05 (continued)
Sample Tag: DUP-09 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	207-08-9	S
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	85-68-7	S
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	91-58-7	S
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	95-57-8	S
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	59-50-7	S
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	106-47-8	S
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	7005-72-3	S
Caprolactam	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	105-60-2	S
Carbazole	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	86-74-8	S
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	111-91-1	S
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	111-44-4	S
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	108-60-1	S
Chrysene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	218-01-9	S
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	120-83-2	S
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	105-67-9	S
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	51-28-5	S
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	121-14-2	S
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	606-20-2	S
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	534-52-1	S
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/05/13 20:16	PL	53-70-3	S
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	132-64-9	S
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	84-66-2	S
Dimethyl phthalate	9	ug/L	1	SW8270C	09/05/13 20:16	PL	131-11-3	SB
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	117-81-7	S
Fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	206-44-0	S
Fluorene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	86-73-7	S
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	87-68-3	S
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	77-47-4	S
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	67-72-1	S
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	193-39-5	S
Isophorone	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	78-59-1	S
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	91-57-6	S
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	95-48-7	S
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	3/4-Cresol	S
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	88-74-4	S
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	88-75-5	S
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	99-09-2	S
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	100-01-6	S
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	100-02-7	S
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	621-64-7	S
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	86-30-6	S
Naphthalene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	91-20-3	S
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	98-95-3	S
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	117-84-0	S
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	87-86-5	S
Phenanthrene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	85-01-8	S
Phenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	108-95-2	S

S-Surrogate recovery outside of control limits
B-Compound also found in associated method blank

Lab Sample ID: S57805.05 (continued)
Sample Tag: DUP-09 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Pyrene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	129-00-0	S
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	95-95-4	S
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	88-06-2	S
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/05/13 20:16	PL	118-74-1	S
TCL Semi-Volatile Organics (Replicate 01)								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	83-32-9	SG
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	208-96-8	SG
Acetophenone	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	98-86-2	SG
Anthracene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	120-12-7	SG
Atrazine	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	1912-24-9	G
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	92-52-4	SG
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	101-55-3	G
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	84-74-2	G
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	100-52-7	SG
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	56-55-3	G
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	50-32-8	G
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	205-99-2	G
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	191-24-2	G
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	207-08-9	G
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	85-68-7	G
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	91-58-7	SG
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	95-57-8	SG
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	59-50-7	SG
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	106-47-8	SG
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	7005-72-3	SG
Caprolactam	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	105-60-2	SG
Carbazole	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	86-74-8	G
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	111-91-1	SG
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	111-44-4	SG
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	108-60-1	SG
Chrysene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	218-01-9	G
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	120-83-2	SG
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	105-67-9	SG
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	51-28-5	SG
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	121-14-2	SG
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	606-20-2	SG
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	534-52-1	SG
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/07/13 21:13	PL	53-70-3	G
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	132-64-9	SG
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	84-66-2	SG
Dimethyl phthalate	18	ug/L	1	SW8270C	09/07/13 21:13	PL	131-11-3	BSG
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	09/07/13 21:13	PL	117-81-7	G
Fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	206-44-0	G
Fluorene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	86-73-7	SG
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	87-68-3	SG

S-Surrogate recovery outside of control limits
G-Estimated result due to extraction run outside of holding time
B-Compound also found in associated method blank

Lab Sample ID: S57805.05 (continued)
Sample Tag: DUP-09 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (Replicate 01) (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	77-47-4	SG
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	67-72-1	SG
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	193-39-5	G
Isophorone	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	78-59-1	SG
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	91-57-6	SG
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	95-48-7	SG
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	3/4-Cresol	SG
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	88-74-4	SG
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	88-75-5	SG
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	99-09-2	SG
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	100-01-6	SG
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	100-02-7	SG
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	621-64-7	SG
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	86-30-6	G
Naphthalene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	91-20-3	SG
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	98-95-3	SG
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	117-84-0	G
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	87-86-5	G
Phenanthrene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	85-01-8	G
Phenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	108-95-2	SG
Pyrene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	129-00-0	G
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	95-95-4	SG
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	88-06-2	SG
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/07/13 21:13	PL	118-74-1	G
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 15:45	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/29/13 18:06	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 18:06	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/29/13 18:06	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	71-55-6	

S-Surrogate recovery outside of control limits G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S57805.05 (continued)
Sample Tag: DUP-09 (08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 18:06	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/29/13 18:06	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/29/13 18:06	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 18:06	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57805.06
Sample Tag: TRIP BLANK(08232013)
Collected Date/Time: 08/23/2013 00:01
Matrix: Groundwater
COC Reference: 75370

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/30/13 09:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 16:03	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/29/13 18:26	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 18:26	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/29/13 18:26	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 18:26	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/29/13 18:26	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	79-34-5	

Lab Sample ID: S57805.06 (continued)
Sample Tag: TRIP BLANK(08232013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/29/13 18:26	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 18:26	JGH	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75370

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8594 FAX NO.: 810-229-8537 P.O. NO.: B00644581.2013
E-MAIL ADDRESS: LANCE.ROGERS QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING PLANT-6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Billy J. Cosgrove

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1,4-D SIMS	TCL SVOC	TAL MERCURY	DISSOLVED TAL MERCURY	Special Instructions
57805.01	8/23/13	8:40	MW-BP-10-WS7-1-4 (08232013)	GW	7	2	3	2					3	2	1	1	
.02/.03/.04	8/23/13	10:35	UNK-03 (08232013)	GW	18	6	9	3					9	6	3		MSMSD
.05	8/23/13	—	DUP-09 (08232013)	GW	6	2	3	1					3	2	1		
.06	—	—	TRIP BLANK (08232013)	GW	1		1						1				

RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS (Sampler)	DATE 8-23-13	TIME 16:15
RECEIVED BY: SIGNATURE/ORGANIZATION	Cliff Wells	DATE 8.23	TIME 1605
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Cliff Wells	DATE 8.23	TIME 16:30
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Federal Express	DATE 8/23/13	TIME 16:20

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57816.01(01)
Generated on 09/11/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57816.01-S57816.02
Project: Plant 6 B0064481
Collected Date: 08/26/2013
Submitted Date/Time: 08/26/2013 15:30
Sampled by: Cliff Walls
P.O. #: B0064481

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57816.01	P6-MW-32	Groundwater	08/26/2013 10:10
S57816.02	Trip Blank	Groundwater	08/26/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57816.01
Sample Tag: P6-MW-32
Collected Date/Time: 08/26/2013 10:10
Matrix: Groundwater
COC Reference: 75249

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.0	IR
2	1L Amber	None	Yes	5.0	IR
3	125ml Plastic	HNO3	Yes	5.0	IR
1	500ml Plastic	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Inorganics								
Alkalinity as CaCO3	904	mg/L	1	2320B	08/29/13 10:34	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/28/13 06:04	JDP	14797-55-8	
Sulfate	Not detected	mg/L	5	E300.0	08/28/13 06:04	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:53	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 15:51	PER	7440-36-0	
Arsenic, Dissolved	0.023	mg/L	0.002	SW6020	09/10/13 15:53	PER	7440-38-2	
Arsenic	0.020	mg/L	0.002	SW6020	09/10/13 15:51	PER	7440-38-2	
Barium, Dissolved	0.231	mg/L	0.005	SW6020	09/10/13 15:53	PER	7440-39-3	
Barium	0.212	mg/L	0.005	SW6020	09/10/13 15:51	PER	7440-39-3	
Boron, Dissolved	0.28	mg/L	0.04	SW6020	09/10/13 15:53	PER	7440-42-8	
Boron	0.26	mg/L	0.04	SW6020	09/10/13 15:51	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 15:53	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 15:51	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:53	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 15:51	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:53	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 15:51	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:53	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/10/13 15:51	PER	7440-50-8	
Iron, Dissolved	12.1	mg/L	0.02	E200.8	09/10/13 15:53	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/10/13 15:53	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 15:51	PER	7439-92-1	
Manganese, Dissolved	0.527	mg/L	0.005	SW6020	09/10/13 15:53	PER	7439-96-5	
Manganese	0.500	mg/L	0.005	SW6020	09/10/13 15:51	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 16:15	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/27/13 16:02	CCM	7439-97-6	
Nickel, Dissolved	0.027	mg/L	0.005	SW6020	09/10/13 15:53	PER	7440-02-0	
Nickel	0.024	mg/L	0.005	SW6020	09/10/13 15:51	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:53	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 15:51	PER	7782-49-2	

Lab Sample ID: S57816.01 (continued)
Sample Tag: P6-MW-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 15:53	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 15:51	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:53	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/10/13 15:51	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:53	PER	7440-66-6	
Zinc	0.015	mg/L	0.005	SW6020	09/10/13 15:51	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	120-83-2	
2,4-Dimethylphenol	24	ug/L	1	SW8270C	09/05/13 20:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/05/13 20:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	132-64-9	
Diethyl phthalate	2	ug/L	1	SW8270C	09/05/13 20:50	PL	84-66-2	B
Dimethyl phthalate	3	ug/L	1	SW8270C	09/05/13 20:50	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	87-68-3	

B-Compound also found in associated method blank

Lab Sample ID: S57816.01 (continued)
Sample Tag: P6-MW-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	78-59-1	
2-Methylnaphthalene	1	ug/L	1	SW8270C	09/05/13 20:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	95-48-7	
3-, 4-Methylphenol	25	ug/L	1	SW8270C	09/05/13 20:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	86-30-6	
Naphthalene	115	ug/L	1	SW8270C	09/05/13 20:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/05/13 20:50	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 16:21	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	76-13-1	Y
Acetone	Not detected	ug/L	500	SW8260B	08/28/13 18:49	WAT	67-64-1	Y
Carbon disulfide	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-15-0	Y
Methyl Acetate	Not detected	ug/L	500	SW8260B	08/28/13 18:49	WAT	79-20-9	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	1634-04-4	Y
2-Butanone (MEK)	Not detected	ug/L	500	SW8260B	08/28/13 18:49	WAT	78-93-3	Y
Dichlorodifluoromethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-71-8	Y
Chloromethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	74-87-3	Y
Vinyl chloride	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-01-4	Y
Bromomethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	74-83-9	Y
Chloroethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-00-3	Y
Trichlorofluoromethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-69-4	Y
1,1-Dichloroethene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-35-4	Y
Methylene chloride	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	156-60-5	Y
1,1-Dichloroethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	156-59-2	Y
Chloroform	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	67-66-3	Y
1,1,1-Trichloroethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	71-55-6	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S57816.01 (continued)
Sample Tag: P6-MW-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	110-82-7	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	500	SW8260B	08/28/13 18:49	WAT	108-10-1	Y
2-Hexanone	Not detected	ug/L	500	SW8260B	08/28/13 18:49	WAT	591-78-6	Y
Carbon tetrachloride	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	56-23-5	Y
Benzene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	71-43-2	Y
1,2-Dichloroethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	107-06-2	Y
Trichloroethene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	79-01-6	Y
1,2-Dichloropropane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	78-87-5	Y
Bromodichloromethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-27-4	Y
Methyl cyclohexane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	108-87-2	Y
cis-1,3-Dichloropropene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	10061-01-5	Y
Toluene	250	ug/L	50	SW8260B	08/28/13 18:49	WAT	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	79-00-5	Y
Tetrachloroethene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	127-18-4	Y
Dibromochloromethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	124-48-1	Y
Chlorobenzene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	108-90-7	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	79-34-5	Y
Ethylbenzene	400	ug/L	50	SW8260B	08/28/13 18:49	WAT	100-41-4	Y
p,m-Xylene	3,300	ug/L	100	SW8260B	08/28/13 18:49	WAT		Y
o-Xylene	1,660	ug/L	50	SW8260B	08/28/13 18:49	WAT	95-47-6	Y
Styrene	Not detected	ug/L	60	SW8260B	08/28/13 18:49	WAT	100-42-5	YX
Isopropylbenzene	170	ug/L	50	SW8260B	08/28/13 18:49	WAT	98-82-8	Y
Bromoform	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	75-25-2	Y
1,3-Dichlorobenzene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	541-73-1	Y
1,4-Dichlorobenzene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	106-46-7	Y
1,2-Dichlorobenzene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	95-50-1	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	120-82-1	Y
1,2-Dibromoethane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	106-93-4	Y
1,2-Dibromo-3-chloropropane	Not detected	ug/L	50	SW8260B	08/28/13 18:49	WAT	96-12-8	Y
Organics								
Methane in Water	7,500	ug/L	100	RSK-175	08/30/13 13:15	TRX	74-82-8	O

Y-Elevated reporting limit due to high target concentration
X-Elevated reporting limit due to matrix interference
O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57816.02
Sample Tag: Trip Blank
Collected Date/Time: 08/26/2013 07:00
Matrix: Groundwater
COC Reference: 75249

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 16:40	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 18:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 18:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 18:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 18:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 18:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	79-34-5	

Lab Sample ID: S57816.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 18:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 18:29	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

75249

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10589 CITATION DRIVE SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

☑ SAME

CONTACT NAME:
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: PLANT 6 B0064481
SAMPLER(S) PLEASE PRINT/SIGN NAME: CLIFF CURTIS

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC SIM 1-4	TCL SVOC	TAL METAL	Diss TAL Metals	Diss Fe + Mn	Methane	Alk, Sul, NIT			
57816.01	8/26/13	10:10	Pb MW-32	GW	12	3	6	3					X	X	X	X	X	X	X			
.02	8/26/13	7:00	TRIP BLANK	AW	1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION: CLIFF CURTIS / MERIT ☑ Sampler DATE: 8/26/13 TIME: 15:30
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: TABITHA FAUST DATE: 8/26/13 TIME: 15:30

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 05, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308514	08/28/2013	S57816

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308514**
Project:	Subcontract Lab Services	Description:	S57816
Client Sample ID:	**57816**	Sampled:	08/26/13 10:10
Lab Sample ID:	**1308514-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**7500**	100	ug/L	200	RSK-175	08/30/13 13:15	JMF	1309152

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309152 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane		33.0	**26.8**	81	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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cooler-client/ Army green

38-21
75478

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com WO# 1308514

C.O.C. PAGE # _____ OF _____

Rack #492W

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 57816
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	
01	8/26	1010	57816	GW	3		X						X	

*Subcd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5972 9877 DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Sarah Slocum/TriMatrix DATE: 8/28/13 TIME: 1205

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

TRIMATRIX LABORATORIES

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: | New / Add To | Receipt Record Page/Line #: 38-21 | Project Chemist | Sample #s

Recorded by (initials/date): SMS 8/28/13

☑ Cooler ☐ Box ☐ Other | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
Client/Army Green 1405			
Custody Seals:			
☑ None	☐ None	☐ None	☐ None
☐ Present / Intact	☐ Present / Intact	☐ Present / Intact	☐ Present / Intact
☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact
Coolant Location:			
(Dispersed) / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via:			
☑ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers
☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers
☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers
☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers
Alternate Temperature Taken Via:			
☐ Temperature Blank (TB)	☐ Temperature Blank (TB)	☐ Temperature Blank (TB)	☐ Temperature Blank (TB)
☐ 1 Container	☐ 1 Container	☐ 1 Container	☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C
Temp Blank:	Temp Blank:	Temp Blank:	Temp Blank:
TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative
1 5.2 – 5.2	1	1	1
2 5.6 – 5.6	2	2	2
3 4.9 – 4.9	3	3	3
Average °C: 5.2	Average °C	Average °C	Average °C
☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?
☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 75478

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Initials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/28/13 1205	8/28/13 1430	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S57818.01(01)
Generated on 09/11/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57818.01-S57818.02
Project: Plant 3 B0064480
Collected Date: 08/27/2013
Submitted Date/Time: 08/27/2013 09:50
Sampled by: Cliff Walls
P.O. #: B0064480

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57818.01	MW-13-32	Groundwater	08/27/2013 09:00
S57818.02	Trip Blank	Groundwater	08/27/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57818.01
Sample Tag: MW-13-32
Collected Date/Time: 08/27/2013 09:00
Matrix: Groundwater
COC Reference: 75311

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	5.0	IR
1	1L Amber	None	Yes	5.0	IR
2	125ml Plastic	HNO3	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/29/13 23:43	EMR		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/27/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
Metal Digestion	Completed			3015A	09/10/13 09:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:57	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 15:55	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020	09/10/13 15:57	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020	09/10/13 15:55	PER	7440-38-2	
Barium, Dissolved	0.146	mg/L	0.005	SW6020	09/10/13 15:57	PER	7440-39-3	
Barium	0.223	mg/L	0.005	SW6020	09/10/13 15:55	PER	7440-39-3	
Boron, Dissolved	0.22	mg/L	0.04	SW6020	09/10/13 15:57	PER	7440-42-8	
Boron	0.22	mg/L	0.04	SW6020	09/10/13 15:55	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 15:57	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 15:55	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:57	PER	7440-47-3	
Chromium	0.010	mg/L	0.005	SW6020	09/10/13 15:55	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:57	PER	7440-48-4	
Cobalt	0.005	mg/L	0.005	SW6020	09/10/13 15:55	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:57	PER	7440-50-8	
Copper	0.047	mg/L	0.005	SW6020	09/10/13 15:55	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/10/13 15:57	PER	7439-92-1	
Lead	0.065	mg/L	0.003	SW6020	09/10/13 15:55	PER	7439-92-1	
Manganese, Dissolved	0.641	mg/L	0.005	SW6020	09/10/13 15:57	PER	7439-96-5	
Manganese	0.625	mg/L	0.005	SW6020	09/10/13 15:55	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/27/13 16:19	CCM	7439-97-6	
Mercury	0.0015	mg/L	0.0001	SW7471A	08/27/13 16:17	CCM	7439-97-6	
Nickel, Dissolved	0.013	mg/L	0.005	SW6020	09/10/13 15:57	PER	7440-02-0	
Nickel	0.043	mg/L	0.005	SW6020	09/10/13 15:55	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:57	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 15:55	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/10/13 15:57	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 15:55	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:57	PER	7440-62-2	
Vanadium	0.017	mg/L	0.005	SW6020	09/10/13 15:55	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/10/13 15:57	PER	7440-66-6	
Zinc	0.191	mg/L	0.005	SW6020	09/10/13 15:55	PER	7440-66-6	

Lab Sample ID: S57818.01 (continued)
Sample Tag: MW-13-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	101-55-3	
di-n-Butyl phthalate	3	ug/L	1	SW8270C	09/05/13 21:24	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	7005-72-3	
Caprolactam	2	ug/L	1	SW8270C	09/05/13 21:24	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/05/13 21:24	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	84-66-2	
Dimethyl phthalate	22	ug/L	1	SW8270C	09/05/13 21:24	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	7	ug/L	1	SW8270C	09/05/13 21:24	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S57818.01 (continued)
Sample Tag: MW-13-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	85-01-8	
Phenol	1	ug/L	1	SW8270C	09/05/13 21:24	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/05/13 21:24	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 16:58	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 21:25	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 21:25	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 21:25	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	156-59-2	
Chloroform	2	ug/L	1	SW8260B	08/28/13 21:25	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 21:25	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 21:25	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-27-4	

Lab Sample ID: S57818.01 (continued)
Sample Tag: MW-13-32

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	10061-01-5	
Toluene	21	ug/L	1	SW8260B	08/28/13 21:25	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 21:25	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 21:25	WAT	96-12-8	
Organics								
Methane in Water	32	ug/L	0.5	RSK-175	08/30/13 10:37	TRX	74-82-8	O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57818.02
Sample Tag: Trip Blank
Collected Date/Time: 08/27/2013 07:00
Matrix: Groundwater
COC Reference: 75311

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/29/13 17:17	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 21:45	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 21:45	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 21:45	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 21:45	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 21:45	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	79-34-5	

Lab Sample ID: S57818.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 21:45	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 21:45	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75311

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lance Rogers
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Lance.Rogers@arcadis.us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 3 B006 4480
SAMPLER(S) - PLEASE PRINT/SIGN NAME: C Watts

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC SIM 14	Methane	TCL SVOC	TAL Metals	TAL Metals					
57818.01	8.27.13	9:00	MW-13-32	GW	9	1	6	2					X	X	X	X	X					
.02	8.27.13	7:00	Trip Blank	GW	1		1						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Merit ☑ Sampler DATE: 8-27-13 TIME: 9:50
RECEIVED BY: SIGNATURE/ORGANIZATION: Merit DATE: 8-27-13 TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 8/27/13 TIME: 950

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308503	08/28/2013	S57818

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308503**
Project:	Subcontract Lab Services	Description:	S57818
Client Sample ID:	**57818.01**	Sampled:	08/27/13 09:00
Lab Sample ID:	**1308503-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/28/13 12:05

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**32**	0.50	ug/L	1	RSK-175	08/30/13 10:37	JMF	1309152

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309152 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/30/2013	By: JMF
Unit: ug/L					Analytical Batch:		3I03042	
Methane		33.0	**26.8**	81	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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Individual sample results relate only to the sample tested.
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Client Cooler/Army Screen

37-14

75479

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com WO# 1308503

C.O.C. PAGE # _____ OF _____

Rack# 451B

CHAIN OF CUSTODY RECORD

REPORT TO		INVOICE TO	
CONTACT NAME	Tabitha Faust	CONTACT NAME	Julie Teague
COMPANY	Merit Labs	COMPANY	
ADDRESS		ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
PHONE NO. / FAX NO. / P.O. NO.		PHONE NO. / E-MAIL ADDRESS	
E-MAIL ADDRESS / QUOTE NO.			

PROJECT NO./NAME: S 57818

SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/27	900	57818.01	GW	3		X						X	
	~~8/27~~	~~700~~	~~57818.02~~ KH											*Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Tabitha Faust ☐ Sampler	DATE 8/27/13	TIME 1600
RECEIVED BY: SIGNATURE/ORGANIZATION	1Z 466 477 03 5972 9877	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Rachel Chadwick / TriMatrix	DATE 8/28/13	TIME 1205
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERITS SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

TRIMATRIX LABORATORIES

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Individual sample results relate only to the sample tested.

5560 Corporate Exchange Court SE ◆ Grand Rapids, MI 49512 ◆ 616.975.4500 ◆ Fax 616.942.7463 ◆ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit
Receipt Record Page/Line #: 37-14
Work Order #: New / Add To: 1308503
Project Chemist | Sample #s

Recorded by (initials/date): SMS 8/28/13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1
☑ IR Gun (#202)
Thermometer Used: ☐ Digital Thermometer (#54) ☐ Other (#_____)
☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Client/ArmyGreen	1346	☑ None ☐ Present / Intact ☐ Present / Not Intact	(Dispersed) / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Client/ArmyGreen	Temp Blank:		
	TB location: Representative / Not Representative		
	1 5.2	—	5.2
	2 5.6	—	5.6
	3 4.9	—	4.9
	Average °C		5.2
	☑ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 75479

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☐	☑	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☑	☐	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/28/13 1205	8/28/13 1403	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Individual sample results relate only to the sample tested.
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Analytical Laboratory Report

Report ID: S57909.01(01)
Generated on 09/11/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57909.01-S57909.02
Project: RACER Lansing/ Lansing MI B0064481.2013.00102
Collected Date: 09/03/2013
Submitted Date/Time: 09/04/2013 12:50
Sampled by: Christine Snyder
P.O. #: B0064481.2013.00102

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57909.01	P6-MH2-SW (09032013)	Water	09/03/2013 11:15
S57909.02	P6-MH2-NE (09032013)	Water	09/03/2013 12:40

Analytical Laboratory Report

Lab Sample ID: S57909.01
Sample Tag: P6-MH2-SW (09032013)
Collected Date/Time: 09/03/2013 11:15
Matrix: Water
COC Reference: 1(090413)

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
2	1L Amber	None	Yes	6.0	IR
1	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	09/06/13 12:00	EMR		
Mercury Digestion	Completed			SW7471A	09/05/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/10/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	09/06/13 10:19	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 16:36	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020	09/10/13 16:36	PER	7440-38-2	
Barium	0.058	mg/L	0.005	SW6020	09/10/13 16:36	PER	7440-39-3	
Boron	0.29	mg/L	0.04	SW6020	09/10/13 16:36	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 16:36	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 16:36	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 16:36	PER	7440-48-4	
Copper	0.015	mg/L	0.005	SW6020	09/10/13 16:36	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 16:36	PER	7439-92-1	
Manganese	0.020	mg/L	0.005	SW6020	09/10/13 16:36	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	09/05/13 15:38	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020	09/10/13 16:36	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/10/13 16:36	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 16:36	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/10/13 16:36	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020	09/10/13 16:36	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	91-58-7	

Lab Sample ID: S57909.01 (continued)
Sample Tag: P6-MH2-SW (09032013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/07/13 21:48	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/07/13 21:48	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/07/13 21:48	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S57909.01 (continued)
Sample Tag: P6-MH2-SW (09032013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	09/05/13 16:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	09/05/13 14:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	09/05/13 14:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	09/05/13 14:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	09/05/13 14:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	09/05/13 14:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	79-34-5	
Ethylbenzene	2	ug/L	1	SW8260B	09/05/13 14:59	WAT	100-41-4	
p,m-Xylene	11	ug/L	2	SW8260B	09/05/13 14:59	WAT		
o-Xylene	3	ug/L	1	SW8260B	09/05/13 14:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	120-82-1	

Lab Sample ID: S57909.01 (continued)
Sample Tag: P6-MH2-SW (09032013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	09/05/13 14:59	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57909.02
Sample Tag: P6-MH2-NE (09032013)
Collected Date/Time: 09/03/2013 12:40
Matrix: Water
COC Reference: 1(090413)

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
2	1L Amber	None	Yes	6.0	IR
1	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	09/06/13 12:00	EMR		
Mercury Digestion	Completed			SW7471A	09/05/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/10/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	09/06/13 10:19	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/10/13 16:42	PER	7440-36-0	
Arsenic	0.011	mg/L	0.002	SW6020	09/10/13 16:42	PER	7440-38-2	
Barium	0.069	mg/L	0.005	SW6020	09/10/13 16:42	PER	7440-39-3	
Boron	0.21	mg/L	0.04	SW6020	09/10/13 16:42	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/10/13 16:42	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/10/13 16:42	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/10/13 16:42	PER	7440-48-4	
Copper	0.014	mg/L	0.005	SW6020	09/10/13 16:42	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/10/13 16:42	PER	7439-92-1	
Manganese	0.099	mg/L	0.005	SW6020	09/10/13 16:42	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	09/05/13 15:40	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020	09/10/13 16:42	PER	7440-02-0	
Selenium	0.006	mg/L	0.005	SW6020	09/10/13 16:42	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/10/13 16:42	PER	7440-22-4	
Vanadium	0.008	mg/L	0.005	SW6020	09/10/13 16:42	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020	09/10/13 16:42	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	91-58-7	

Lab Sample ID: S57909.02 (continued)
Sample Tag: P6-MH2-NE (09032013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	120-83-2	
2,4-Dimethylphenol	5	ug/L	1	SW8270C	09/07/13 22:22	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	09/07/13 22:22	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	09/07/13 22:22	PL	131-11-3	B
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	09/07/13 22:22	PL	118-74-1	

B-Compound also found in associated method blank

Lab Sample ID: S57909.02 (continued)
Sample Tag: P6-MH2-NE (09032013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	09/05/13 16:52	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	76-13-1	
Acetone	11	ug/L	10	SW8260B	09/05/13 15:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	09/05/13 15:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	09/05/13 15:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	09/05/13 15:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	09/05/13 15:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	09/05/13 15:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	120-82-1	

Lab Sample ID: S57909.02 (continued)
Sample Tag: P6-MH2-NE (09032013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	09/05/13 15:19	WAT	96-12-8	

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ID#: I (090413)

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: ARCADIS Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr Ste 100	Fax:
City: Brighton State: MI Zip: 48116	E-mail Address: Randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing/Lansing MI	Project #: See Below
Sampler's Printed Name: Christine Snyder	Sampler's Signature: Christine Snyder

Preservative	None	HCL	HCL	HNO_3			
Filtered (✓)							
# of Containers	2	3 →		1			
Container Information	2	40ml →		3			

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil, W - Water, SL - Sludge, SW - Sample Wipe, T - Tissue, A - Air, Other: _____

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL SVOCs	TCL VOCs	1-4 Dioxane SIMS	TAL Metals		PO #	REMARKS
57909.01 P6-MH2-SW (09032013)	9-3-13	1115		X	W	X	X	X	X		B0064481.2013.00102	
.02 P6-MH2-NE (09032013)	9-3-13	1240		X	W	X	X	X	X			
57910.01 P2-MH-W (09032013)	9-3-13	1500		X	W	X	X	X	X		B0064479.2013.00102	
.02 P2-MH-NW (09032013)	9-3-13	1545		X	W	X	X	X	X			
CS ~~P3-MH-S (09032013)~~												
57911.01 P3-MH-S (09042013)	9-4-13	0855		X	W	X	X	X	X			
.02 P3-MH-NE (09042013)	9-4-13	0935		X	W	X	X	X	X		B0064480.2013.00102	
.03 P2 Outfall at P3 (09042013)	9-4-13	1145		X	W	X	X	X	X			

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Christine Snyder	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☐ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature: Christine Snyder	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements:	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 6.0	Date/Time: 9-4-13/1250	Date/Time:	Date/Time:	Date/Time: 9-4-13 1250

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S57730.01(01)
Generated on 09/06/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57730.01-S57730.03
Project: RACER LANSING PLANT 3
Collected Date: 08/20/2013
Submitted Date/Time: 08/21/2013 09:30
Sampled by: Billy J Coben
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57730.01	MW-13-27(08202013)	Groundwater	08/20/2013 14:25
S57730.02	MW-13-34(08202013)	Groundwater	08/20/2013 16:25
S57730.03	TRIP BLANK(08202013)	Liquid	08/20/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57730.01
Sample Tag: MW-13-27(08202013)
Collected Date/Time: 08/20/2013 14:25
Matrix: Groundwater
COC Reference: 75448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020	09/04/13 17:28	PER	7440-38-2	
Barium	0.050	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	09/04/13 17:28	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 17:28	PER	7439-92-1	
Manganese	0.832	mg/L	0.005	SW6020	09/04/13 17:28	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 14:56	CCM	7439-97-6	
Nickel	0.029	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 17:28	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 17:28	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020	09/04/13 17:28	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	91-58-7	

Lab Sample ID: S57730.01 (continued)
Sample Tag: MW-13-27(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 22:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/28/13 22:33	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 22:33	PL	118-74-1	

Lab Sample ID: S57730.01 (continued)
Sample Tag: MW-13-27(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 18:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 19:52	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 19:52	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 19:52	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 19:52	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 19:52	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 19:52	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	120-82-1	

Lab Sample ID: S57730.01 (continued)
Sample Tag: MW-13-27(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:52	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57730.02
Sample Tag: MW-13-34(08202013)
Collected Date/Time: 08/20/2013 16:25
Matrix: Groundwater
COC Reference: 75448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
3	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	440	mg/L	1	2320B	08/23/13 10:20	JDP		
Carbon Dioxide	290	mg/L	10	4500-CO2C	08/21/13 10:42	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 11:42	JDP	14797-55-8	
Sulfate	253	mg/L	20	E300.0	08/22/13 13:37	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-36-0	
Arsenic, Dissolved	0.007	mg/L	0.002	SW6020	09/04/13 17:40	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020	09/04/13 17:31	PER	7440-38-2	
Barium, Dissolved	0.085	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-39-3	
Barium	0.102	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	09/04/13 17:40	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020	09/04/13 17:31	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-47-3	
Chromium	0.005	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-50-8	
Iron, Dissolved	14.7	mg/L	0.02	E200.8	09/04/13 17:40	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/04/13 17:40	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 17:31	PER	7439-92-1	
Manganese, Dissolved	0.129	mg/L	0.005	E200.8	09/04/13 17:40	PER	7439-96-5	
Manganese	0.187	mg/L	0.005	SW6020	09/04/13 17:31	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:00	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 14:58	CCM	7439-97-6	
Nickel, Dissolved	0.019	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-02-0	
Nickel	0.024	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:40	PER	7782-49-2	

Lab Sample ID: S57730.02 (continued)
Sample Tag: MW-13-34(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 17:31	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/04/13 17:40	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 17:31	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-62-2	
Zinc, Dissolved	0.036	mg/L	0.005	SW6020	09/04/13 17:40	PER	7440-66-6	
Zinc	0.064	mg/L	0.005	SW6020	09/04/13 17:31	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 23:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/28/13 23:07	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/28/13 23:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	87-68-3	

Lab Sample ID: S57730.02 (continued)
Sample Tag: MW-13-34(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 23:07	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	17	ug/L	5	SW8260B - SIM	08/22/13 18:21	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 20:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 20:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 20:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	110-82-7	

Lab Sample ID: S57730.02 (continued)
Sample Tag: MW-13-34(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 20:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 20:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 20:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:11	WAT	96-12-8	
Organics								
Methane in Water	11	ug/L	0.5	RSK-175	08/29/13 11:34	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57730.03
Sample Tag: TRIP BLANK(08202013)
Collected Date/Time: 08/20/2013 00:01
Matrix: Liquid
COC Reference: 75448

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 18:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 20:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 20:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 20:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 20:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 20:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	79-34-5	

Lab Sample ID: S57730.03 (continued)
Sample Tag: TRIP BLANK(08202013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 20:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 20:32	WAT	96-12-8	

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308432	08/22/2013	S57730

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

This report shall not be reproduced, except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308432**
Project:	Subcontract Lab Services	Description:	S57730
Client Sample ID:	**57730-.02**	Sampled:	08/20/13 14:25
Lab Sample ID:	**1308432-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**11**	0.50	ug/L	1	RSK-175	08/29/13 11:34	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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27-13

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308432

75467

CHAIN OF CUSTODY RECORD

Rack # 116 White

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557730
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO3	H2SO4	NaOH	MeOH	OTHER	Methane	
-01	8/20	1425	557730.02	GW	3		X						X	* Sub'a to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/21/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5973 1033 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8/22/13 TIME: 1245
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
NOTES: TEMP. ON ARRIVAL: _____

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308432
Receipt Record Page/Line # | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): LR 8/22/13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Client (RUSH)	1355	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	4.9	–	4.9
2	4.9	–	4.9
3	5.1	–	5.1
Average °C			5.0
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/22/13 1245	8/22/13 1414	Yes / (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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C.O.C. PAGE # 1 OF 1

75448

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559 CITATION DRIVE SUITE 100
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810-229-8584 FAX NO.: 810-229-8837
P.O. NO.: 30064480.2013
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM
QUOTE NO.:

INVOICE TO

CONTACT NAME: SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: RACER LANSING PLAN-3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: BILLY J. COOK

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC, 1,4-D Silica	TCL SVOC	TAL METALS Dissolved Fe, Mn	Sulfate, Nitrate, Cl2, Alkalinity	METHANE	Dissolved TAL Metals			
5730.01	8/20/13	14:25	MW-13-27 (08202013)	GW	6	2	3	1					3	2	1						
.02	8/20/13	16:25	MW-13-34 (08202013)	GW	12	3	6	3					3	2	1	1	1	3	1		
.03	—	—	TRIP BLANK (08202013)	W	2		2						2								

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ARCADIS ☑ Sampler DATE: 8-20-13 TIME: 17:05
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8-00- TIME: 17:05
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 8-21 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: 8-21-13 TIME: 9:30
RECEIVED BY: SIGNATURE/ORGANIZATION: Barbara Ball DATE: 8/21/13 TIME: 9:30

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57757.01(01)
Generated on 09/09/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57757.01-S57757.03
Project: Plant 2 B0064479
Collected Date: 08/21/2013
Submitted Date/Time: 08/22/2013 10:00
Sampled by: Cliff Walls
P.O. #: B0064479

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57757.01	Trip Blank	Groundwater	08/21/2013 07:00
S57757.02	MW-12-06	Groundwater	08/21/2013 14:40
S57757.03	MW-12-05	Groundwater	08/21/2013 16:50

Analytical Laboratory Report

Lab Sample ID: S57757.01
Sample Tag: Trip Blank
Collected Date/Time: 08/21/2013 07:00
Matrix: Groundwater
COC Reference: 75495

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 21:04	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 17:39	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 17:39	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 17:39	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 17:39	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 17:39	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	79-34-5	

Lab Sample ID: S57757.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 17:39	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 17:39	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57757.02
Sample Tag: MW-12-06
Collected Date/Time: 08/21/2013 14:40
Matrix: Groundwater
COC Reference: 75495

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
3	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	415	mg/L	1	2320B	08/28/13 13:12	JDP		
Carbon Dioxide	221	mg/L	10	4500-CO2C	08/22/13 11:12	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 10:06	JDP	14797-55-8	
Sulfate	22	mg/L	5	E300.0	08/23/13 10:06	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:14	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 17:12	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/06/13 17:14	PER	7440-38-2	
Arsenic	0.002	mg/L	0.002	SW6020	09/06/13 17:12	PER	7440-38-2	
Barium, Dissolved	0.043	mg/L	0.005	SW6020	09/06/13 17:14	PER	7440-39-3	
Barium	0.050	mg/L	0.005	SW6020	09/06/13 17:12	PER	7440-39-3	
Boron, Dissolved	0.24	mg/L	0.04	SW6020	09/06/13 17:14	PER	7440-42-8	
Boron	0.22	mg/L	0.04	SW6020	09/06/13 17:12	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/06/13 17:14	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 17:12	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:14	PER	7440-47-3	
Chromium	0.005	mg/L	0.005	SW6020	09/06/13 17:12	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:14	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 17:12	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:14	PER	7440-50-8	
Copper	0.007	mg/L	0.005	SW6020	09/06/13 17:12	PER	7440-50-8	
Iron, Dissolved	15.6	mg/L	0.02	E200.8	09/06/13 17:14	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/06/13 17:14	PER	7439-92-1	
Lead	0.004	mg/L	0.003	SW6020	09/06/13 17:12	PER	7439-92-1	
Manganese, Dissolved	0.090	mg/L	0.005	SW6020	09/06/13 17:14	PER	7439-96-5	
Manganese	0.100	mg/L	0.005	SW6020	09/06/13 17:12	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:34	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:32	CCM	7439-97-6	
Nickel, Dissolved	0.008	mg/L	0.005	SW6020	09/06/13 17:14	PER	7440-02-0	
Nickel	0.011	mg/L	0.005	SW6020	09/06/13 17:12	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:14	PER	7782-49-2	

Lab Sample ID: S57757.02 (continued)
Sample Tag: MW-12-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 17:12	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/06/13 17:14	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 17:12	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:14	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 17:12	PER	7440-62-2	
Zinc, Dissolved	0.006	mg/L	0.005	SW6020	09/06/13 17:14	PER	7440-66-6	
Zinc	0.013	mg/L	0.005	SW6020	09/06/13 17:12	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/31/13 00:56	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/31/13 00:56	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/31/13 00:56	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	87-68-3	

Lab Sample ID: S57757.02 (continued)
Sample Tag: MW-12-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/31/13 00:56	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/31/13 00:56	JGH	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 21:22	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	76-13-1	
Acetone	10	ug/L	10	SW8260B	08/28/13 16:39	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 16:39	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 16:39	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	110-82-7	

Lab Sample ID: S57757.02 (continued)
Sample Tag: MW-12-06

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 16:39	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 16:39	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 16:39	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 16:39	WAT	96-12-8	
Organics								
Methane in Water	9.3	ug/L	0.5	RSK-175	08/29/13 13:10	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57757.03
Sample Tag: MW-12-05
Collected Date/Time: 08/21/2013 16:50
Matrix: Groundwater
COC Reference: 75495

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
3	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/26/13 21:17	EMR		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/23/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
Metal Digestion	Completed			3015A	09/06/13 12:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 14:20	LBR		
Inorganics								
Alkalinity as CaCO3	414	mg/L	1	2320B	08/28/13 13:14	JDP		
Carbon Dioxide	220	mg/L	10	4500-CO2C	08/22/13 11:14	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/23/13 10:18	JDP	14797-55-8	
Sulfate	1,350	mg/L	250	E300.0	08/23/13 11:33	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:18	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/06/13 17:16	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	09/06/13 17:18	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/06/13 17:16	PER	7440-38-2	
Barium, Dissolved	0.034	mg/L	0.005	SW6020	09/06/13 17:18	PER	7440-39-3	
Barium	0.034	mg/L	0.005	SW6020	09/06/13 17:16	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020	09/06/13 17:18	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020	09/06/13 17:16	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020	09/06/13 17:18	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020	09/06/13 17:16	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:18	PER	7440-47-3	
Chromium	0.006	mg/L	0.005	SW6020	09/06/13 17:16	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:18	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/06/13 17:16	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:18	PER	7440-50-8	
Copper	0.009	mg/L	0.005	SW6020	09/06/13 17:16	PER	7440-50-8	
Iron, Dissolved	8.00	mg/L	0.02	E200.8	09/06/13 17:18	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/06/13 17:18	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/06/13 17:16	PER	7439-92-1	
Manganese, Dissolved	0.075	mg/L	0.005	SW6020	09/06/13 17:18	PER	7439-96-5	
Manganese	0.076	mg/L	0.005	SW6020	09/06/13 17:16	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:42	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/23/13 15:36	CCM	7439-97-6	
Nickel, Dissolved	0.045	mg/L	0.005	SW6020	09/06/13 17:18	PER	7440-02-0	
Nickel	0.044	mg/L	0.005	SW6020	09/06/13 17:16	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:18	PER	7782-49-2	

Lab Sample ID: S57757.03 (continued)
Sample Tag: MW-12-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/06/13 17:16	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/06/13 17:18	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/06/13 17:16	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/06/13 17:18	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/06/13 17:16	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020	09/06/13 17:18	PER	7440-66-6	
Zinc	0.008	mg/L	0.005	SW6020	09/06/13 17:16	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/31/13 01:30	JGH	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/31/13 01:30	JGH	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	87-68-3	

Lab Sample ID: S57757.03 (continued)
Sample Tag: MW-12-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	117-84-0	
Pentachlorophenol	Not detected	ug/L	2	SW8270C	08/31/13 01:30	JGH	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/31/13 01:30	JGH	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 21:41	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 17:00	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 17:00	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 17:00	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	110-82-7	

Lab Sample ID: S57757.03 (continued)
Sample Tag: MW-12-05

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 17:00	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 17:00	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 17:00	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 17:00	WAT	96-12-8	
Organics								
Methane in Water	22	ug/L	0.5	RSK-175	08/29/13 13:13	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75495

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lance Rogers
COMPANY: Arcadis
ADDRESS: 10375 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: LanceRogers@arcadis.us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 2 B0064479
SAMPLER(S) PLEASE PRINT/SIGN NAME: Cliff Curtis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC SW 14	TCL SVOC	Diss TAL Metals	TAL Metals	Diss Fe + Mn	AK Cl & Nat Gas	Methane			
57757.01	8-21-13	7:00	Trip Blank	GW	1		1						X									
.02	8-21-13	14:40	MW-12-06	GW	12	3	6	3					X	X	X	X	X	X	X			
.03	8-21-13	16:50	MW-12-05	GW	12	3	6	3					X	X	X	X	X	X	X			

RELINQUISHED BY: SIGNATURE/ORGANIZATION: ☐ Sampler DATE 8-21-13 TIME 1800
RECEIVED BY: SIGNATURE/ORGANIZATION: ME Stone DATE 8-21-13 TIME 1800

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE 8-22-13 TIME 1000
RECEIVED BY: SIGNATURE/ORGANIZATION: Fed Ex DATE 8/22/13 TIME 10:00

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE 8-22-13 TIME 915

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308450	08/23/2013	S57757

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

This report shall not be reproduced, except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308450**
Project:	Subcontract Lab Services	Description:	S57757
Client Sample ID:	**57757.02**	Sampled:	08/21/13 14:40
Lab Sample ID:	**1308450-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/23/13 13:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**9.3**	0.50	ug/L	1	RSK-175	08/29/13 13:10	JMF	1309108

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308450**
Project:	Subcontract Lab Services	Description:	S57757
Client Sample ID:	**57757.03**	Sampled:	08/21/13 16:50
Lab Sample ID:	**1308450-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/23/13 13:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**22**	0.50	ug/L	1	RSK-175	08/29/13 13:13	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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29-16

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

#1308455
75471

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: S 57757
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO3	H2SO4	NaOH	MeOH	OTHER	Methane	
-01	8/21	1440	S 7757.02	GW	3		X						X	
-02	8/21	1650	S 7757.03	↓	↓		↓						X	*Subd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/22/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5951 8050 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Julie Romeyn Trimatrix DATE: 8/23/13 TIME: 1330

SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL: 3.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE TO MERITS SAMPLE ACCEPTANCE POLICY AND TERMS

TRIMATRIX LABORATORIES

This report shall not be reproduced, except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

5560 Corporate Exchange Court SE ◆ Grand Rapids, MI 49512 ◆ 616.975.4500 ◆ Fax 616.942.7463 ◆ www.trimatrixlabs.com

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit
Receipt Record Page/Line #:
Work Order #: 1308450
New / Add To
Project Chemist | Sample #s

Recorded by (initials/date): JR 8/23/13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Recorded °C	Correction Factor °C	Actual °C
Client Red Med.	1414			
Temp Blank:				
TB location: Representative / Not Representative				
1		2.8	-	2.8
2		4.3	-	4.3
3		2.9	-	2.9
		Average °C		3.3

Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container
☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time
Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time
Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Cooler # | Time
Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑	☐	Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____
COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐	☐	If "No", Project Chemist Approval Intials: _____
☑	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐	☐	Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐	☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/23/13 1330	8/23/13 1425	(Yes) / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Analytical Laboratory Report

Report ID: S58664.01(01)
Generated on 10/24/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58664.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/23/2013
Submitted Date/Time: 10/23/2013 16:35
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58664.01	VAP-P2-PV76 (98-103)	Water	10/23/2013 15:30

Analytical Laboratory Report

Lab Sample ID: S58664.01
Sample Tag: VAP-P2-PV76 (98-103)
Collected Date/Time: 10/23/2013 15:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/24/13 10:44	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/23/13 16:58	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	10/23/13 17:10	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/23/13 17:10	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	10/23/13 17:10	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/23/13 17:10	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	10/23/13 17:10	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	79-34-5	

Lab Sample ID: S58664.01 (continued)
Sample Tag: VAP-P2-PV76 (98-103)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/23/13 17:10	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/23/13 17:10	JGH	96-12-8	

ARCADIS
Infrastructure · Water · Environment · Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randychristensen@arcadis-us.com
Project Name/Location (City, State): BAKER Lansing, MI Plant 2	Project #: B001447.2013.00006
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B							
Filtered (✓)								
# of Containers	3							
Container Information	1							

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC	1,4-dioxane SIM							
58664.01 VAP-P2-PV76(98-103)	10/22/13	1530		✓	W	✓								

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.2	Date/Time: 10/23/13 1630	Date/Time:	Date/Time:	Date/Time: 10/23/13 1635

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58651.01(01)
Generated on 10/24/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58651.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/23/2013
Submitted Date/Time: 10/23/2013 12:20
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

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IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58651.01	VAP-P2-PV76 (80-85)	Water	10/23/2013 11:30

Analytical Laboratory Report

Lab Sample ID: S58651.01
Sample Tag: VAP-P2-PV76 (80-85)
Collected Date/Time: 10/23/2013 11:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	10/24/13 10:40	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/23/13 14:37	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	10/23/13 15:08	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/23/13 15:08	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	10/23/13 15:08	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/23/13 15:08	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	10/23/13 15:08	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	10061-01-5	
Toluene	2	ug/L	1	SW8260C	10/23/13 15:08	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	79-34-5	

Lab Sample ID: S58651.01 (continued)
Sample Tag: VAP-P2-PV76 (80-85)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/23/13 15:08	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/23/13 15:08	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christenson	Telephone: 810-225-7440
Address: 10559 Citation Dr, Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christenson@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B0064479.2013.00006
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TCL VOC 1,4-dioxane SIM	
58651 01 VAP-2-RW76(80-85)	10/23/13	1130		✓	W	B		3	1	✓	

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Engore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.2	Date/Time: 10/23/13 1216	Date/Time:	Date/Time:	Date/Time: 10/23/13 1220

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58640.01(01)
Generated on 10/23/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58640.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/22/2013
Submitted Date/Time: 10/22/2013 13:25
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58640.01	VAP-P2-PU122 (90-95)	Water	10/22/2013 12:35

Analytical Laboratory Report

Lab Sample ID: S58640.01
Sample Tag: VAP-P2-PU122 (90-95)
Collected Date/Time: 10/22/2013 12:35
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/23/13 10:10	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/22/13 14:54	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	10/22/13 15:19	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/22/13 15:19	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	10/22/13 15:19	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/22/13 15:19	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	10/22/13 15:19	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	56-23-5	
Benzene	2	ug/L	1	SW8260C	10/22/13 15:19	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	10061-01-5	
Toluene	1	ug/L	1	SW8260C	10/22/13 15:19	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	79-34-5	

Lab Sample ID: S58640.01 (continued)
Sample Tag: VAP-P2-PU122 (90-95)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/22/13 15:19	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/22/13 15:19	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B00644479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B
Filtered (✓)	
# of Containers	3
Container Information	1

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC 1,4-dioxane SIMS
586940.01 VAP-P2-PU122(90-95)	10/22/13	1235		✓	W	✓

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:

★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.0	Date/Time: 10/22/13 1325	Date/Time:	Date/Time:	Date/Time: 10/22/13 1325

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58621.01(01)
Generated on 10/22/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58621.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/21/2013
Submitted Date/Time: 10/21/2013 12:50
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58621.01	VAP-P2-PU122 (62-70)	Water	10/21/2013 12:15

Analytical Laboratory Report

Lab Sample ID: S58621.01
Sample Tag: VAP-P2-PU122 (62-70)
Collected Date/Time: 10/21/2013 12:15
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/21/13 16:20	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/21/13 19:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	10/21/13 16:58	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/21/13 16:58	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	10/21/13 16:58	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/21/13 16:58	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	10/21/13 16:58	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	79-34-5	

Lab Sample ID: S58621.01 (continued)
Sample Tag: VAP-P2-PU122 (62-70)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/21/13 16:58	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/21/13 16:58	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr. Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Landing, MI Plant 2	Project #: B006447.9.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TCL VOC	1,4-dioxane SIM5	REMARKS
58621 01 VAP-P2-PW22(62-70)	10/21/13	1215		✓	W	B		3	1	✓		

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Special Instructions/Comments:
★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.8	Date/Time: 10/21/13 1250	Date/Time:	Date/Time:	Date/Time: 10/21/13 1250

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58584.01(01)
Generated on 10/21/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Jeff Davin, Lance Rogers, Danielle Olexa

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58584.01-S58584.02
Project: B0064479.2013.00106/ RACER Lansing, MI
Collected Date: 10/17/2013
Submitted Date/Time: 10/18/2013 08:24
Sampled by: Thomas Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58584.01	MW-13-37 (67-72)	Water	10/17/2013 15:00
S58584.02	MW-13-37 (92-97)	Water	10/17/2013 17:00

Analytical Laboratory Report

Lab Sample ID: S58584.01
Sample Tag: MW-13-37 (67-72)
Collected Date/Time: 10/17/2013 15:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	10/21/13 15:13	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/18/13 14:07	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	10/18/13 14:21	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/18/13 14:21	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	10/18/13 14:21	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/18/13 14:21	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	10/18/13 14:21	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	79-34-5	

Lab Sample ID: S58584.01 (continued)
Sample Tag: MW-13-37 (67-72)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/18/13 14:21	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/18/13 14:21	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58584.02
Sample Tag: MW-13-37 (92-97)
Collected Date/Time: 10/17/2013 17:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/21/13 10:17	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/18/13 14:26	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	10/18/13 14:41	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/18/13 14:41	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	10/18/13 14:41	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/18/13 14:41	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	10/18/13 14:41	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	79-34-5	

Lab Sample ID: S58584.02 (continued)
Sample Tag: MW-13-37 (92-97)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/18/13 14:41	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/18/13 14:41	JGH	96-12-8	

ARCADIS
Infrastructure Water Environment Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name:	Telephone:
Randy Christenson ARCADIS	810.225-1940
Address: 10559 Citation Dr. Suite 100	Fax:
City / State / Zip: Brighton MI 48116	E-mail Address: Randy.Christenson@arcadis-us.com
Project Name/Location (City, State): RACER / Lansing, MI	Project #: B006447.2013.00106
Sampler's Printed Name: Thomas Darmon	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: TAL VOCs 8260 + 1,4 dioxane 3/4	REMARKS
58584.01 MW-13-37(67-72)	10/17/13	1500		✓	W	B		3	1	X	
58584.02 MW-13-37(92-97)	10/17/13	1700		✓	W	B		3	1	X	

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Special Instructions/Comments:
2 day turn around

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Thomas Darmon	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: 2 days	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 10/18/13 0824	Date/Time:	Date/Time:	Date/Time: 10/18/13 824

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58612.01(01)
Generated on 10/21/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58612.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/18/2013
Submitted Date/Time: 10/18/2013 16:40
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58612.01	VAP-P2-PV101 (89-94)	Water	10/18/2013 16:10

Analytical Laboratory Report

Lab Sample ID: S58612.01
Sample Tag: VAP-P2-PV101 (89-94)
Collected Date/Time: 10/18/2013 16:10
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/21/13 10:20	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/18/13 17:14	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	76-13-1	
Acetone	985	ug/L	10	SW8260C	10/18/13 17:32	JGH	67-64-1	E
Carbon disulfide	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/18/13 17:32	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	10/18/13 17:32	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/18/13 17:32	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	10/18/13 17:32	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	56-23-5	
Benzene	1	ug/L	1	SW8260C	10/18/13 17:32	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	10061-01-5	
Toluene	300	ug/L	1	SW8260C	10/18/13 17:32	JGH	108-88-3	E
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	108-90-7	

E-Concentration exceeds calibration range

Lab Sample ID: S58612.01 (continued)
Sample Tag: VAP-P2-PV101 (89-94)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/18/13 17:32	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/18/13 17:32	JGH	96-12-8	
TCL Volatile Organics 8260 (Replicate 01)								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	76-13-1	Y
Acetone	1,730	ug/L	100	SW8260C	10/21/13 14:52	WAT	67-64-1	Y
Carbon disulfide	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-15-0	Y
Methyl Acetate	Not detected	ug/L	100	SW8260C	10/21/13 14:52	WAT	79-20-9	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	1634-04-4	Y
2-Butanone (MEK)	Not detected	ug/L	100	SW8260C	10/21/13 14:52	WAT	78-93-3	Y
Dichlorodifluoromethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-71-8	Y
Chloromethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	74-87-3	Y
Vinyl chloride	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-01-4	Y
Bromomethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	74-83-9	Y
Chloroethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-00-3	Y
Trichlorofluoromethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-69-4	Y
1,1-Dichloroethene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-35-4	Y
Methylene chloride	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	156-60-5	Y
1,1-Dichloroethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	156-59-2	Y
Chloroform	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	67-66-3	Y
1,1,1-Trichloroethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	71-55-6	Y
Cyclohexane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	110-82-7	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	100	SW8260C	10/21/13 14:52	WAT	108-10-1	Y
2-Hexanone	Not detected	ug/L	100	SW8260C	10/21/13 14:52	WAT	591-78-6	Y
Carbon tetrachloride	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	56-23-5	Y
Benzene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	71-43-2	Y
1,2-Dichloroethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	107-06-2	Y
Trichloroethene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	79-01-6	Y
1,2-Dichloropropane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	78-87-5	Y
Bromodichloromethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-27-4	Y
Methyl cyclohexane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	108-87-2	Y
cis-1,3-Dichloropropene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	10061-01-5	Y
Toluene	190	ug/L	10	SW8260C	10/21/13 14:52	WAT	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	79-00-5	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S58612.01 (continued)
Sample Tag: VAP-P2-PV101 (89-94)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (Replicate 01) (continued)								
Tetrachloroethene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	127-18-4	Y
Dibromochloromethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	124-48-1	Y
Chlorobenzene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	108-90-7	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	79-34-5	Y
Ethylbenzene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	100-41-4	Y
p,m-Xylene	Not detected	ug/L	20	SW8260C	10/21/13 14:52	WAT		Y
o-Xylene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	95-47-6	Y
Styrene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	100-42-5	Y
Isopropylbenzene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	98-82-8	Y
Bromoform	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	75-25-2	Y
1,3-Dichlorobenzene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	541-73-1	Y
1,4-Dichlorobenzene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	106-46-7	Y
1,2-Dichlorobenzene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	95-50-1	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	120-82-1	Y
1,2-Dibromoethane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	106-93-4	Y
1,2-Dibromo-3-chloropropane	Not detected	ug/L	10	SW8260C	10/21/13 14:52	WAT	96-12-8	Y

Y-Elevated reporting limit due to high target concentration

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B0064479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B						
Filtered (✓)							
# of Containers	3						
Container Information	1						

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC + 1,4-dioxane (SIM)	REMARKS
VAP-P2-PV101 (89-94)	10/18/13	1610		✓	W	✓	

Special Instructions/Comments:

★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.9	Date/Time: 10/18/13 1640	Date/Time:	Date/Time:	Date/Time: 10/18/13 1640

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58571.01(01)
Generated on 10/18/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58571.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/17/2013
Submitted Date/Time: 10/17/2013 16:07
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58571.01	VAP-P2-PV101 (65-70)	Water	10/17/2013 15:50

Analytical Laboratory Report

Lab Sample ID: S58571.01
Sample Tag: VAP-P2-PV101 (65-70)
Collected Date/Time: 10/17/2013 15:50
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/18/13 13:21	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/17/13 19:02	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Acetone	Not detected	ug/L	10	SW8260C	10/17/13 16:56	JGH		
Carbon disulfide	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/17/13 16:56	JGH		
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	10/17/13 16:56	JGH	200,000	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Chloromethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	200	
Bromomethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Chloroethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	700	
Methylene chloride	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Chloroform	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	6,000	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Cyclohexane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/17/13 16:56	JGH		
2-Hexanone	Not detected	ug/L	10	SW8260C	10/17/13 16:56	JGH		
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	500	
Benzene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	500	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	500	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	500	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Toluene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	700	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	100,000	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		

Lab Sample ID: S58571.01 (continued)
Sample Tag: VAP-P2-PV101 (65-70)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/17/13 16:56	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Styrene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
Bromoform	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH	7,500	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/17/13 16:56	JGH		

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10569 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christense@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B00604479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B
Filtered (✓)	
# of Containers	3
Container Information	1

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC 1,4-dioxane sim	REMARKS
58571.01 VAP-P2-PV101 (65-70)	10/17/13	1550		✓	W	✓	

Special Instructions/Comments:
☆ 24-hour Real Time results needed ☆

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.3	Date/Time: 10/17/13 1607	Date/Time:	Date/Time:	Date/Time: 10/17/13 1607

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58566.01(01)
Generated on 10/18/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58566.01
Project: B0064481.2013.00106/ RACER Lansing, MI Plant 6
Collected Date: 10/17/2013
Submitted Date/Time: 10/17/2013 09:13
Sampled by: Austin Westhmis
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58566.01	VAP-P6-QP71 (79-87)	Water	10/17/2013 09:00

Analytical Laboratory Report

Lab Sample ID: S58566.01
Sample Tag: VAP-P6-QP71 (79-87)
Collected Date/Time: 10/17/2013 09:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/17/13 16:30	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/17/13 15:06	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/17/13 15:11	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/17/13 15:11	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/17/13 15:11	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/17/13 15:11	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/17/13 15:11	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	79-34-5	

Lab Sample ID: S58566.01 (continued)
Sample Tag: VAP-P6-QP71 (79-87)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/17/13 15:11	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/17/13 15:11	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr. Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plantle	Project #: B00644181.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B						
Filtered (✓)							
# of Containers	3						
Container Information	1						

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC ✓	1,4-dioxane SIM							REMARKS
58566.01 VAP-P6-QP71(79-87)	10/17/13	0900		✓	W	✓								

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Special Instructions/Comments:
★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.8	Date/Time: 10/17/13 0913	Date/Time:	Date/Time:	Date/Time: 10/17/13 913

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Supplemental Report

Report ID: S58552.01(02)
Generated on 10/17/2013
Replaces report S58552.01(01) generated on 10/17/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Jeff Davin, Lance Rogers, Danielle Olexa

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58552.01-S58552.02
Project: B0064479.2013.00106/ RACER Lansing, MI
Collected Date: 10/16/2013
Submitted Date/Time: 10/16/2013 15:05
Sampled by: Thomas Darmon
P.O. #: B0064479.2013.00106

.01 re-analyzed per client request

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58552.01	MW-13-38 (77-82)	Water	10/16/2013 10:15
S58552.02	MW-13-38 (102-107)	Water	10/16/2013 14:25

Lab Sample ID: S58552.01
Sample Tag: MW-13-38 (77-82)
Collected Date/Time: 10/16/2013 10:15
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/17/13 12:40	JGH		
Organics - Volatiles								
1,4-Dioxane	47	ug/L	5	SW8260B - SIM	10/16/13 18:03	JGH	123-91-1	
1,4-Dioxane (Replicate 01)	45	ug/L	5	SW8260B - SIM	10/17/13 15:24	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	108-90-7	

Lab Sample ID: S58552.01 (continued)
Sample Tag: MW-13-38 (77-82)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/16/13 19:13	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	96-12-8	

Lab Sample ID: S58552.02
Sample Tag: MW-13-38 (102-107)
Collected Date/Time: 10/16/2013 14:25
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/17/13 12:48	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/16/13 18:21	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	79-34-5	

Lab Sample ID: S58552.02 (continued)
Sample Tag: MW-13-38 (102-107)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/16/13 19:34	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen ARCADIS	Telephone: 810-225-1940
Address: 10559 Citation Dr. Suite 100	Fax:
City: Brighton State: MI Zip: 48116	E-mail Address: Randy.Christensen@arcadis-us.com
Project Name/Location (City, State): Race / Lansing, MI	Project #: B0064479.2013.00106
Sampler's Printed Name: Thomas Darmon	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: TAL VOCs 8260 + 1,4 dioxane SIM	REMARKS
58552.01 MW-13-38 (77-82')	10/14/13	1015		✓		B		3	1	X	
58552.02 MW-13-38 (102-107')	10/14/13	1425		✓		B		3	1	X	

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
SE - Sediment
NL - NAPL/Oil
W - Water
SL - Sludge
SW - Sample Wipe
T - Tissue
A - Air
Other: _____

Special Instructions/Comments:
2 day turn around

☐ **Special QA/QC Instructions(✓):**

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Thomas Darmon	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: 2 days	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.7	Date/Time: 10/14/13 1503	Date/Time:	Date/Time:	Date/Time: 10/16/13 1505 ~~1905~~

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58552.01(01)
Generated on 10/17/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Jeff Davin, Lance Rogers, Danielle Olexa

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58552.01-S58552.02
Project: B0064479.2013.00106/ RACER Lansing, MI
Collected Date: 10/16/2013
Submitted Date/Time: 10/16/2013 15:05
Sampled by: Thomas Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58552.01	MW-13-38 (77-82)	Water	10/16/2013 10:15
S58552.02	MW-13-38 (102-107)	Water	10/16/2013 14:25

Analytical Laboratory Report

Lab Sample ID: S58552.01
Sample Tag: MW-13-38 (77-82)
Collected Date/Time: 10/16/2013 10:15
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/17/13 12:40	JGH		
Organics - Volatiles								
1,4-Dioxane	47	ug/L	5	SW8260B - SIM	10/16/13 18:03	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/16/13 19:13	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	79-34-5	

Lab Sample ID: S58552.01 (continued)
Sample Tag: MW-13-38 (77-82)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/16/13 19:13	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/16/13 19:13	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58552.02
Sample Tag: MW-13-38 (102-107)
Collected Date/Time: 10/16/2013 14:25
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/17/13 12:48	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/16/13 18:21	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/16/13 19:34	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	79-34-5	

Lab Sample ID: S58552.02 (continued)
Sample Tag: MW-13-38 (102-107)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/16/13 19:34	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/16/13 19:34	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen ARCADIS	Telephone: 810-225-1940
Address: 10559 Citation Dr. Suite 100	Fax:
City: Brighton State: MI Zip: 48116	E-mail Address: Randy.Christensen@arcadis-us.com
Project Name/Location (City, State): Race / Lansing, MI	Project #: B0064479.2013.00106
Sampler's Printed Name: Thomas Darmon	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: TAL VOCs 8260 + 1,4 dioxane SIM	REMARKS
58552.01 MW-13-38 (77-82')	10/14/13	1015		✓		B		3	1	X	
58552.02 MW-13-38 (102-107')	10/14/13	1425		✓		B		3	1	X	

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
SE - Sediment
NL - NAPL/Oil
W - Water
SL - Sludge
SW - Sample Wipe
T - Tissue
A - Air
Other: _____

Special Instructions/Comments:
2 day turn around

☐ **Special QA/QC Instructions(✓):**

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Thomas Darmon	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: 2 days	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.7	Date/Time: 10/14/13 1503	Date/Time:	Date/Time:	Date/Time: 10/16/13 1505 ~~1905~~

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58548.01(01)
Generated on 10/17/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Jeff Davin, Lance Rogers, Danielle Olexa

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58548.01
Project: B0064481.2013.00106/ RACER Lansing, MI Plant 6
Collected Date: 10/16/2013
Submitted Date/Time: 10/16/2013 11:20
Sampled by: Austin Westhmis
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58548.01	VAP-P6-QV150 (77-87)	Water	10/16/2013 08:30

Analytical Laboratory Report

Lab Sample ID: S58548.01
Sample Tag: VAP-P6-QV150 (77-87)
Collected Date/Time: 10/16/2013 08:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/17/13 12:40	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/16/13 15:01	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	76-13-1	
Acetone	17	ug/L	10	SW8260B	10/16/13 14:29	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/16/13 14:29	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/16/13 14:29	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/16/13 14:29	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/16/13 14:29	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	79-34-5	

Lab Sample ID: S58548.01 (continued)
Sample Tag: VAP-P6-QV150 (77-87)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/16/13 14:29	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/16/13 14:29	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen
Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100
Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116
E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant
Project #: B0064481.2013.00106
Sampler's Printed Name: Austin Westhuis
Sampler's Signature:

Preservative	B						
Filtered (✓)							
# of Containers	3						
Container Information	1						

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC 1,4-dioxane SIM							REMARKS
5948.01 VAP-P6-QV150(TT-87)	10/16/13	0830		✓	W	✓							

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Special Instructions/Comments:
★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Real time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.8	Date/Time: 10/16/13 1120	Date/Time:	Date/Time:	Date/Time: 10/16/13 1120

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58527.01(01)
Generated on 10/16/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Jeff Davin, Lance Rogers, Danielle Olexa

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58527.01-S58527.02
Project: B0064479.2013.00106/ RACER Lansing, MI
Collected Date: 10/14/2013 - 10/15/2013
Submitted Date/Time: 10/15/2013 10:40
Sampled by: Thomas Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
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IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58527.01	MW-13-39 (77-82)	Water	10/14/2013 16:15
S58527.02	MW-13-39 (92-97)	Water	10/15/2013 09:30

Analytical Laboratory Report

Lab Sample ID: S58527.01
Sample Tag: MW-13-39 (77-82)
Collected Date/Time: 10/14/2013 16:15
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/16/13 12:45	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/15/13 14:14	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/15/13 21:23	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/15/13 21:23	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/15/13 21:23	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/15/13 21:23	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/15/13 21:23	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	79-34-5	

Lab Sample ID: S58527.01 (continued)
Sample Tag: MW-13-39 (77-82)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/15/13 21:23	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/15/13 21:23	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S58527.02
Sample Tag: MW-13-39 (92-97)
Collected Date/Time: 10/15/2013 09:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/16/13 12:45	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/15/13 14:32	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/15/13 21:45	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/15/13 21:45	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/15/13 21:45	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/15/13 21:45	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/15/13 21:45	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	79-34-5	

Lab Sample ID: S58527.02 (continued)
Sample Tag: MW-13-39 (92-97)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/15/13 21:45	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/15/13 21:45	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen ARCADIS	Telephone: 810-225-1940
Address: 1655A Citation Dr. Suite 100	Fax:
City: Brighton State: MI Zip: 48116	E-mail Address: Randy.Christensen@arcadis-us.com
Project Name/Location (City, State): Racer / Lansing MI	Project #: B006479.2013.00106
Sampler's Printed Name: Thomas Darmon	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix
58527.01	MW-13-39 (77-82)	10/14/13	1615	✓	W
.02	MW-13-39 (92-97)	~~10/14/13~~ 10/15/13	0930	✓	W

Preservative	B							
Filtered (✓)								
# of Containers	3							
Container Information	1							

PARAMETER ANALYSIS & METHOD

TAL VOCs 8260; 1,4-dioxane SIM

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

REMARKS

Special Instructions/Comments:
2 day turn around

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Thomas Darmon	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements: 2 days	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 10/15/13 1040	Date/Time:	Date/Time:	Date/Time: 10/15/13 1040

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58526.01(01)
Generated on 10/16/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Jeff Davin, Lance Rogers, Danielle Olexa

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58526.01
Project: B0064481.2013.00106/ RACER Lansing, MI Plant 6
Collected Date: 10/15/2013
Submitted Date/Time: 10/15/2013 10:15
Sampled by: Austin Westhmis
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58526.01	VAP-P6-QV91 (75-85)	Water	10/15/2013 09:45

Analytical Laboratory Report

Lab Sample ID: S58526.01
Sample Tag: VAP-P6-QV91 (75-85)
Collected Date/Time: 10/15/2013 09:45
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/16/13 10:30	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/15/13 13:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/15/13 21:02	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/15/13 21:02	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/15/13 21:02	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/15/13 21:02	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/15/13 21:02	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	79-34-5	

Lab Sample ID: S58526.01 (continued)
Sample Tag: VAP-P6-QV91 (75-85)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/15/13 21:02	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/15/13 21:02	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 6	Project #: B00644481.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TCL VOC	1,4-dioxane SIM
J6526.01 VAP-P6-QV91 (75-85)	10/13/13	0945		✓	W	B		3	1	✓	

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:

★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Frost
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 10/15/13 1015	Date/Time:	Date/Time:	Date/Time: 10/15/13 1015

Distribution: WHITE – Laboratory returns with results; YELLOW – Lab copy; PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58509.01(01)
Generated on 10/14/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58509.01
Project: B0064481.2013.00106/ RACER Lansing, MI Plant 6
Collected Date: 10/11/2013
Submitted Date/Time: 10/11/2013 16:25
Sampled by: Austin Westhmis
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58509.01	VAP-P6-QV131 (80-85)	Water	10/11/2013 15:50

Analytical Laboratory Report

Lab Sample ID: S58509.01
Sample Tag: VAP-P6-QV131 (80-85)
Collected Date/Time: 10/11/2013 15:50
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/14/13 10:21	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/11/13 20:11	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/11/13 17:00	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/11/13 17:00	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/11/13 17:00	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/11/13 17:00	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/11/13 17:00	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	79-34-5	

Lab Sample ID: S58509.01 (continued)
Sample Tag: VAP-P6-QV131 (80-85)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/11/13 17:00	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/11/13 17:00	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-5837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 6	Project #: B0064481.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TCL VOC + 1,4-dioxane SIM
58509.01 VAP-P10-QV131 (80-85)	10/11/13	1550		✓	W	B		3	1	✓

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 10/11/13 1620	Date/Time:	Date/Time:	Date/Time: 10/11/13 1625

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58474.01(01)
Generated on 10/14/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58474.01
Project: B0064481.2013.00106/ RACER Lansing, MI Plant 6
Collected Date: 10/11/2013
Submitted Date/Time: 10/11/2013 09:45
Sampled by: Austin Westhmis
P.O. #: B0064481.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58474.01	VAP-P6-QV111 (65-75)	Water	10/11/2013 08:45

Analytical Laboratory Report

Lab Sample ID: S58474.01
Sample Tag: VAP-P6-QV111 (65-75)
Collected Date/Time: 10/11/2013 08:45
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/14/13 10:21	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/11/13 13:50	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/11/13 15:32	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/11/13 15:32	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/11/13 15:32	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/11/13 15:32	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/11/13 15:32	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	79-34-5	

Lab Sample ID: S58474.01 (continued)
Sample Tag: VAP-P6-QV111 (65-75)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/11/13 15:32	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/11/13 15:32	JGH	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: RANDY CHRISTENSEN	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 6	Project #: 60064481.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	TCL VOC	1,4-dioxane SIM	REMARKS
58474.01 VAP-PL-QVIII(65-75)	10/11/13	0845		✓	W	B		3	1	✓	✓	

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil, W - Water, SL - Sludge, SW - Sample Wipe, T - Tissue, A - Air, Other: _____

Special Instructions/Comments:
~~*~~ Real Time 24-hour results needed ~~*~~

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.9	Date/Time: 10/11/13 0940	Date/Time:	Date/Time:	Date/Time: 10/11/13 945

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58464.01(01)
Generated on 10/11/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58464.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/10/2013
Submitted Date/Time: 10/10/2013 10:30
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58464.01	VAP-P2-MI62 (70-75)	Water	10/10/2013 10:00

Analytical Laboratory Report

Lab Sample ID: S58464.01
Sample Tag: VAP-P2-MI62 (70-75)
Collected Date/Time: 10/10/2013 10:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/11/13 10:15	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/10/13 13:58	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/10/13 15:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/10/13 15:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/10/13 15:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/10/13 15:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/10/13 15:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	79-34-5	

Lab Sample ID: S58464.01 (continued)
Sample Tag: VAP-P2-MI62 (70-75)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/10/13 15:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/10/13 15:31	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton State: MI Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B006447A.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B						
Filtered (✓)							
# of Containers	3						
Container Information	1						

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC	1,4-dioxane SIMS						
584641.01 VAP-P2-MI62(70-75)	10/10/13	1000		✓	W	✓							

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 mL Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
* Real Time 24-hour results needed *

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Real time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.0	Date/Time: 10/10/13 1030	Date/Time:	Date/Time:	Date/Time: 10/10/13 1030

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58444.01(01)
Generated on 10/10/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58444.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/09/2013
Submitted Date/Time: 10/09/2013 14:25
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58444.01	VAP-P2-0U142 (80-85)	Water	10/09/2013 13:45

Analytical Laboratory Report

Lab Sample ID: S58444.01
Sample Tag: VAP-P2-0U142 (80-85)
Collected Date/Time: 10/09/2013 13:45
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	10/10/13 10:33	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/10/13 13:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/09/13 16:00	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/09/13 16:00	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/09/13 16:00	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/09/13 16:00	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/09/13 16:00	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	79-34-5	

Lab Sample ID: S58444.01 (continued)
Sample Tag: VAP-P2-0U142 (80-85)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/09/13 16:00	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/09/13 16:00	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant2	Project #: B006447.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B						
Filtered (✓)							
# of Containers	3						
Container Information	1						

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC	1,4-dioxane SIM						
584414.01 VAP-P2-OU142(80-85)	10/9/13	1345		✓	W	✓							

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
* Real Time 24-hour results needed *

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 4.9	Date/Time: 10/9/13 1425	Date/Time:	Date/Time:	Date/Time: 10/9/13 1425

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58440.01(01)
Generated on 10/09/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58440.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/08/2013
Submitted Date/Time: 10/08/2013 15:30
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58440.01	VAP-P2-0S78 (70-75)	Water	10/08/2013 15:00

Analytical Laboratory Report

Lab Sample ID: S58440.01
Sample Tag: VAP-P2-0S78 (70-75)
Collected Date/Time: 10/08/2013 15:00
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	10/09/13 10:39	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/08/13 16:13	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/08/13 16:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/08/13 16:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/08/13 16:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/08/13 16:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/08/13 16:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	79-34-5	

Lab Sample ID: S58440.01 (continued)
Sample Tag: VAP-P2-0S78 (70-75)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/08/13 16:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/08/13 16:19	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B0064479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

58440.01

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: TCL VOC + 1,4-dioxane SIM	REMARKS
VAP-P2-0578(70-75)	10/8/13	1500		✓	W	B		3	1	✓	

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

Special Instructions/Comments:
★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)		Signature:	Signature:	Signature:	Signature: Kevin George
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.2	Date/Time: 10/8/13 1530	Date/Time:	Date/Time:	Date/Time: 10/8/13 1530

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58426.01(01)
Generated on 10/09/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58426.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/08/2013
Submitted Date/Time: 10/08/2013 12:20
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58426.01	VAP-P2-0S78 (60-65)	Water	10/08/2013 11:35

Analytical Laboratory Report

Lab Sample ID: S58426.01
Sample Tag: VAP-P2-0S78 (60-65)
Collected Date/Time: 10/08/2013 11:35
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	10/09/13 10:36	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/08/13 13:46	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	10/08/13 15:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/08/13 15:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	10/08/13 15:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/08/13 15:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/08/13 15:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	79-34-5	

Lab Sample ID: S58426.01 (continued)
Sample Tag: VAP-P2-0S78 (60-65)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/08/13 15:13	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/08/13 15:13	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christenson	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christenson@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B0004479.2013.00102
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B							
Filtered (✓)								
# of Containers	3							
Container Information	1							

PARAMETER ANALYSIS & METHOD

TCL VOC
1,4-dioxane SIM

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

58426 .01 Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC	1,4-dioxane SIM	REMARKS
VAP-P2-0578 (60-65)	10/8/13	1135		✓	W	✓		

Special Instructions/Comments:
★ Real Time 24-hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Kevin George
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: _____	Date/Time: 10/8/13 1217	Date/Time:	Date/Time:	Date/Time: 10/9/13 1220

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58424.01(01)
Generated on 10/08/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58424.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/07/2013
Submitted Date/Time: 10/07/2013 16:00
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58424.01	VAP-P2-0S120 (72-77)	Water	10/07/2013 15:30

Analytical Laboratory Report

Lab Sample ID: S58424.01
Sample Tag: VAP-P2-0S120 (72-77)
Collected Date/Time: 10/07/2013 15:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	10/08/13 10:16	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	10/08/13 13:27	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	76-13-1	
Acetone	60	ug/L	10	SW8260B	10/07/13 17:13	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/07/13 17:13	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	1634-04-4	
2-Butanone (MEK)	22	ug/L	10	SW8260B	10/07/13 17:13	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/07/13 17:13	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/07/13 17:13	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	56-23-5	
Benzene	33	ug/L	1	SW8260B	10/07/13 17:13	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	10061-01-5	
Toluene	12	ug/L	1	SW8260B	10/07/13 17:13	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	79-34-5	

Lab Sample ID: S58424.01 (continued)
Sample Tag: VAP-P2-0S120 (72-77)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	1	ug/L	1	SW8260B	10/07/13 17:13	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	10/07/13 17:13	WAT		
o-Xylene	2	ug/L	1	SW8260B	10/07/13 17:13	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/07/13 17:13	WAT	96-12-8	

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ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-8837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Landing, MI Plant 2	Project #: B0064479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B						
Filtered (✓)							
# of Containers	3						
Container Information	1						

PARAMETER ANALYSIS & METHOD

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC 1,4-dioxane SIMS							
52424.01 VAP-P2-05120(72-77)	10/1/13	1530		✓	W	✓							

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil
W - Water, SL - Sludge, SW - Sample Wipe
T - Tissue, A - Air, Other: _____

REMARKS

Special Instructions/Comments:
★ Real Time 24 hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements: Real Time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 6.0	Date/Time: 10/1/13 1600	Date/Time:	Date/Time:	Date/Time: 10/1/13 1600

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S58388.01(01)
Generated on 10/07/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 517-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Lance Rogers

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S58388.01
Project: B0064479.2013.00106/ RACER Lansing, MI Plant 2
Collected Date: 10/04/2013
Submitted Date/Time: 10/04/2013 14:05
Sampled by: Austin Westhmis
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S58388.01	VAP-P2-0S100 (70-75)	Water	10/04/2013 13:30

Analytical Laboratory Report

Lab Sample ID: S58388.01
Sample Tag: VAP-P2-0S100 (70-75)
Collected Date/Time: 10/04/2013 13:30
Matrix: Water
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	10/07/13 10:45	WAT		
Organics - Volatiles								
1,4-Dioxane	196	ug/L	5	SW8260B - SIM	10/04/13 14:41	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	76-13-1	
Acetone	53	ug/L	10	SW8260B	10/04/13 14:44	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/04/13 14:44	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	1634-04-4	
2-Butanone (MEK)	21	ug/L	10	SW8260B	10/04/13 14:44	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/04/13 14:44	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/04/13 14:44	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	56-23-5	
Benzene	25	ug/L	1	SW8260B	10/04/13 14:44	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	10061-01-5	
Toluene	13	ug/L	1	SW8260B	10/04/13 14:44	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	124-48-1	S
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	108-90-7	S

S-Surrogate recovery outside of control limits

Lab Sample ID: S58388.01 (continued)
Sample Tag: VAP-P2-0S100 (70-75)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	79-34-5	S
Ethylbenzene	2	ug/L	1	SW8260B	10/04/13 14:44	WAT	100-41-4	S
p,m-Xylene	3	ug/L	2	SW8260B	10/04/13 14:44	WAT		S
o-Xylene	2	ug/L	1	SW8260B	10/04/13 14:44	WAT	95-47-6	S
Styrene	1	ug/L	1	SW8260B	10/04/13 14:44	WAT	100-42-5	S
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	98-82-8	S
Bromoform	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	75-25-2	S
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	541-73-1	SI
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	106-46-7	SI
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	95-50-1	SI
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	120-82-1	SI
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	106-93-4	SI
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/04/13 14:44	WAT	96-12-8	SI
TCL Volatile Organics 8260 (Replicate 01)								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	76-13-1	
Acetone	50	ug/L	10	SW8260B	10/04/13 15:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	10/04/13 15:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	1634-04-4	
2-Butanone (MEK)	18	ug/L	10	SW8260B	10/04/13 15:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	10/04/13 15:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	10/04/13 15:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	56-23-5	
Benzene	24	ug/L	1	SW8260B	10/04/13 15:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	10061-01-5	
Toluene	12	ug/L	1	SW8260B	10/04/13 15:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	10061-02-6	

S-Surrogate recovery outside of control limits
I-Matrix interference with internal standard

Lab Sample ID: S58388.01 (continued)
Sample Tag: VAP-P2-0S100 (70-75)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (Replicate 01) (continued)								
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	124-48-1	SI
Chlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	108-90-7	SI
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	79-34-5	SI
Ethylbenzene	2	ug/L	1	SW8260B	10/04/13 15:11	WAT	100-41-4	SI
p,m-Xylene	2	ug/L	2	SW8260B	10/04/13 15:11	WAT		SI
o-Xylene	2	ug/L	1	SW8260B	10/04/13 15:11	WAT	95-47-6	SI
Styrene	1	ug/L	1	SW8260B	10/04/13 15:11	WAT	100-42-5	SI
Isopropylbenzene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	98-82-8	SI
Bromoform	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	75-25-2	SI
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	541-73-1	SI
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	106-46-7	SI
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	95-50-1	SI
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	120-82-1	SI
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	106-93-4	SI
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	10/04/13 15:11	WAT	96-12-8	SI

S-Surrogate recovery outside of control limits I-Matrix interference with internal standard

ARCADIS
Infrastructure · Water · Environment · Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #

Send Results to:

Contact & Company Name: Randy Christensen	Telephone: 810-225-1940
Address: 10559 Citation Dr., Suite 100	Fax: 810-229-9837
City: Brighton, State: MI, Zip: 48116	E-mail Address: randy.christensen@arcadis-us.com
Project Name/Location (City, State): RACER Lansing, MI Plant 2	Project #: B00644479.2013.00106
Sampler's Printed Name: Austin Westhuis	Sampler's Signature:

Preservative	B							
Filtered (✓)								
# of Containers	3							
Container Information	1							

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil, SE - Sediment, NL - NAPL/Oil, W - Water, SL - Sludge, SW - Sample Wipe, T - Tissue, A - Air, Other: _____

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	TCL VOC	1,4-dioxane Sim	REMARKS
588386.01 VAP-P2-05100(70-75)	10/4/13	1330		✓	W	✓		

Special Instructions/Comments:

★ Real time 24 hour results needed ★

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Merit	Cooler Custody Seal (✓)	Printed Name: Austin Westhuis	Printed Name:	Printed Name:	Printed Name: Tabitha Faust
☒ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature: Tabitha Faust
Specify Turnaround Requirements: Real time 24-hour	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: Merit
Shipping Tracking #:	Condition/Cooler Temp: 5.1	Date/Time: 10/4/13 1405	Date/Time:	Date/Time:	Date/Time: 10/4/13 1405

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by ARCADIS

Analytical Laboratory Report

Report ID: S57885.01(01)
Generated on 09/03/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57885.01
Project: B0064479.2013.00106/ RACER
Collected Date: 08/30/2013
Submitted Date/Time: 08/30/2013 10:16
Sampled by: Tom Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57885.01	VAP-P2-MH82 (67-72')	Groundwater	08/30/2013 09:50

Analytical Laboratory Report

Lab Sample ID: S57885.01
Sample Tag: VAP-P2-MH82 (67-72')
Collected Date/Time: 08/30/2013 09:50
Matrix: Groundwater
COC Reference: 75749

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	09/03/13 10:40	LBR		
Organics - Volatiles								
1,4-Dioxane	26	ug/L	5	SW8260B - SIM	08/30/13 13:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	76-13-1	
Acetone	13	ug/L	10	SW8260B	08/30/13 13:57	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/30/13 13:57	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/30/13 13:57	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/30/13 13:57	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/30/13 13:57	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	79-34-5	

Lab Sample ID: S57885.01 (continued)
Sample Tag: VAP-P2-MH82 (67-72')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/30/13 13:57	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/30/13 13:57	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75749

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: RANDY CHRISTENSEN
COMPANY: ARCADIS US INC
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1945 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: Accounting NAME:
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: BP#64479. 2013. #6196 / RACER
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Tom Dalmon /
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER Actual 24 HR
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL VOCs 8260	1,4 dioxane SIM
578850 1	8/30/13	0950	VAP-P2-MH82 (67-72')	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tom Dalmon / ARCADIS ☐ Sampler DATE: 8/30/13 TIME: 1016
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 8/30/13 TIME: 1016

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Revised Report

Report ID: S57858.01(02)
Generated on 08/30/2013
Replaces report S57858.01(01) generated on 08/29/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57858.01
Project: B0064479.2013.00106/ RACER
Collected Date: 08/28/2013
Submitted Date/Time: 08/29/2013 08:00
Sampled by: Tom Darmon
P.O. #: B0064479.2013.00106

Sample tag changed per client request

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57858.01	VAP-P2-MI101 (72-77')	Groundwater	08/28/2013 17:20

Lab Sample ID: S57858.01
Sample Tag: VAP-P2-MI101 (72-77')
Collected Date/Time: 08/28/2013 17:20
Matrix: Groundwater
COC Reference: 75711

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	08/29/13 14:54	JGH		
Organics - Volatiles								
1,4-Dioxane	55	ug/L	5	SW8260B - SIM	08/29/13 13:56	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	76-13-1	
Acetone	610	ug/L	10	SW8260B	08/29/13 13:58	JGH	67-64-1	E
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 13:58	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	1634-04-4	
2-Butanone (MEK)	305	ug/L	10	SW8260B	08/29/13 13:58	JGH	78-93-3	E
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 13:58	JGH	108-10-1	
2-Hexanone	44	ug/L	10	SW8260B	08/29/13 13:58	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	56-23-5	
Benzene	113	ug/L	1	SW8260B	08/29/13 13:58	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	10061-01-5	
Toluene	89	ug/L	1	SW8260B	08/29/13 13:58	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	108-90-7	

E-Concentration exceeds calibration range

Lab Sample ID: S57858.01 (continued)
Sample Tag: VAP-P2-MI101 (72-77')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	79-34-5	
Ethylbenzene	13	ug/L	1	SW8260B	08/29/13 13:58	JGH	100-41-4	
p,m-Xylene	15	ug/L	2	SW8260B	08/29/13 13:58	JGH		
o-Xylene	21	ug/L	1	SW8260B	08/29/13 13:58	JGH	95-47-6	
Styrene	7	ug/L	1	SW8260B	08/29/13 13:58	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	96-12-8	
TCL Volatile Organics 8260 (Replicate 01)								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	76-13-1	Y
Acetone	770	ug/L	100	SW8260B	08/29/13 14:39	JGH	67-64-1	Y
Carbon disulfide	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-15-0	Y
Methyl Acetate	Not detected	ug/L	100	SW8260B	08/29/13 14:39	JGH	79-20-9	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	1634-04-4	Y
2-Butanone (MEK)	350	ug/L	100	SW8260B	08/29/13 14:39	JGH	78-93-3	Y
Dichlorodifluoromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-71-8	Y
Chloromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	74-87-3	Y
Vinyl chloride	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-01-4	Y
Bromomethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	74-83-9	Y
Chloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-00-3	Y
Trichlorofluoromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-69-4	Y
1,1-Dichloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-35-4	Y
Methylene chloride	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	156-60-5	Y
1,1-Dichloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	156-59-2	Y
Chloroform	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	67-66-3	Y
1,1,1-Trichloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	71-55-6	Y
Cyclohexane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	110-82-7	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	100	SW8260B	08/29/13 14:39	JGH	108-10-1	Y
2-Hexanone	Not detected	ug/L	100	SW8260B	08/29/13 14:39	JGH	591-78-6	Y
Carbon tetrachloride	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	56-23-5	Y
Benzene	130	ug/L	10	SW8260B	08/29/13 14:39	JGH	71-43-2	Y
1,2-Dichloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	107-06-2	Y
Trichloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	79-01-6	Y
1,2-Dichloropropane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	78-87-5	Y
Bromodichloromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-27-4	Y
Methyl cyclohexane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	108-87-2	Y
cis-1,3-Dichloropropene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	10061-01-5	Y
Toluene	110	ug/L	10	SW8260B	08/29/13 14:39	JGH	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	79-00-5	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S57858.01 (continued)
Sample Tag: VAP-P2-MI101 (72-77')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (Replicate 01) (continued)								
Tetrachloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	127-18-4	Y
Dibromochloromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	124-48-1	Y
Chlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	108-90-7	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	79-34-5	Y
Ethylbenzene	20	ug/L	10	SW8260B	08/29/13 14:39	JGH	100-41-4	Y
p,m-Xylene	Not detected	ug/L	20	SW8260B	08/29/13 14:39	JGH		Y
o-Xylene	30	ug/L	10	SW8260B	08/29/13 14:39	JGH	95-47-6	Y
Styrene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	100-42-5	Y
Isopropylbenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	98-82-8	Y
Bromoform	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-25-2	Y
1,3-Dichlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	541-73-1	Y
1,4-Dichlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	106-46-7	Y
1,2-Dichlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	95-50-1	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	120-82-1	Y
1,2-Dibromoethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	106-93-4	Y
1,2-Dibromo-3-chloropropane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	96-12-8	Y

Y-Elevated reporting limit due to high target concentration

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2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75711

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS US INC
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO. | P.O. NO. | QUOTE NO.
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com

INVOICE TO

CONTACT NAME: Accounting ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | E-MAIL ADDRESS

PROJECT NO./NAME: B006479.2013.00106 / RACER
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Tom Darmon

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☑ OTHER Actual 24hr

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL VOCs 8260	1,4 dioxane SIM
57858.01	8/28/13	1720	VAP-P2-MW101 (72-77')	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tom Darmon / ARCADIS ☐ Sampler DATE: 8/28/13 TIME: 1800
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Dropbox DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Tasha Trent DATE: 8/29/13 TIME: 800

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 6c 0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57864.01(01)
Generated on 08/29/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57864.01
Project: B0064479.2013.00106
Collected Date: 08/29/2013
Submitted Date/Time: 08/29/2013 12:10
Sampled by: Tom Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57864.01	VAP-P2-LN73 (67-72')	Groundwater	08/29/2013 11:45

Analytical Laboratory Report

Lab Sample ID: S57864.01
Sample Tag: VAP-P2-LN73 (67-72')
Collected Date/Time: 08/29/2013 11:45
Matrix: Groundwater
COC Reference: 75748

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	08/29/13 15:13	JGH		
Organics - Volatiles								
1,4-Dioxane	6	ug/L	5	SW8260B - SIM	08/29/13 15:27	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/29/13 14:18	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 14:18	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/29/13 14:18	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 14:18	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/29/13 14:18	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	79-34-5	

Lab Sample ID: S57864.01 (continued)
Sample Tag: VAP-P2-LN73 (67-72')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/29/13 14:18	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 14:18	JGH	96-12-8	

Merit Laboratories, Inc.
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C.O.C. PAGE # 1 OF 1

75748

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS US INC
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: Accounting ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: BP64479.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Tom Darmon

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER Actual 24 hr

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs 8260	1,4 dioxane SIM
57864.01	8/24/13	1145	VAP-P2-LN73 (67-72')	GW	3		X						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tom Darmon / ARCADIS ☒ Sampler DATE: 8/25/13 TIME: 1210
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8/29/13 TIME: 1210

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57858.01(01)
Generated on 08/29/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57858.01
Project: B0064479.2013.00106/ RACER
Collected Date: 08/28/2013
Submitted Date/Time: 08/29/2013 08:00
Sampled by: Tom Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
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Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57858.01	VAP-P2-M1101 (72-77')	Groundwater	08/28/2013 17:20

Analytical Laboratory Report

Lab Sample ID: S57858.01
Sample Tag: VAP-P2-M1101 (72-77')
Collected Date/Time: 08/28/2013 17:20
Matrix: Groundwater
COC Reference: 75711

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	08/29/13 14:54	JGH		
Organics - Volatiles								
1,4-Dioxane	55	ug/L	5	SW8260B - SIM	08/29/13 13:56	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	76-13-1	
Acetone	610	ug/L	10	SW8260B	08/29/13 13:58	JGH	67-64-1	E
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/29/13 13:58	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	1634-04-4	
2-Butanone (MEK)	305	ug/L	10	SW8260B	08/29/13 13:58	JGH	78-93-3	E
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/29/13 13:58	JGH	108-10-1	
2-Hexanone	44	ug/L	10	SW8260B	08/29/13 13:58	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	56-23-5	
Benzene	113	ug/L	1	SW8260B	08/29/13 13:58	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	10061-01-5	
Toluene	89	ug/L	1	SW8260B	08/29/13 13:58	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	108-90-7	

E-Concentration exceeds calibration range

Lab Sample ID: S57858.01 (continued)
Sample Tag: VAP-P2-M1101 (72-77')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	79-34-5	
Ethylbenzene	13	ug/L	1	SW8260B	08/29/13 13:58	JGH	100-41-4	
p,m-Xylene	15	ug/L	2	SW8260B	08/29/13 13:58	JGH		
o-Xylene	21	ug/L	1	SW8260B	08/29/13 13:58	JGH	95-47-6	
Styrene	7	ug/L	1	SW8260B	08/29/13 13:58	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/29/13 13:58	JGH	96-12-8	
TCL Volatile Organics 8260 (Replicate 01)								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	76-13-1	Y
Acetone	770	ug/L	100	SW8260B	08/29/13 14:39	JGH	67-64-1	Y
Carbon disulfide	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-15-0	Y
Methyl Acetate	Not detected	ug/L	100	SW8260B	08/29/13 14:39	JGH	79-20-9	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	1634-04-4	Y
2-Butanone (MEK)	350	ug/L	100	SW8260B	08/29/13 14:39	JGH	78-93-3	Y
Dichlorodifluoromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-71-8	Y
Chloromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	74-87-3	Y
Vinyl chloride	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-01-4	Y
Bromomethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	74-83-9	Y
Chloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-00-3	Y
Trichlorofluoromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-69-4	Y
1,1-Dichloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-35-4	Y
Methylene chloride	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-09-2	Y
trans-1,2-Dichloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	156-60-5	Y
1,1-Dichloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-34-3	Y
cis-1,2-Dichloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	156-59-2	Y
Chloroform	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	67-66-3	Y
1,1,1-Trichloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	71-55-6	Y
Cyclohexane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	110-82-7	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	100	SW8260B	08/29/13 14:39	JGH	108-10-1	Y
2-Hexanone	Not detected	ug/L	100	SW8260B	08/29/13 14:39	JGH	591-78-6	Y
Carbon tetrachloride	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	56-23-5	Y
Benzene	130	ug/L	10	SW8260B	08/29/13 14:39	JGH	71-43-2	Y
1,2-Dichloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	107-06-2	Y
Trichloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	79-01-6	Y
1,2-Dichloropropane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	78-87-5	Y
Bromodichloromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-27-4	Y
Methyl cyclohexane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	108-87-2	Y
cis-1,3-Dichloropropene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	10061-01-5	Y
Toluene	110	ug/L	10	SW8260B	08/29/13 14:39	JGH	108-88-3	Y
trans-1,3-Dichloropropene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	10061-02-6	Y
1,1,2-Trichloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	79-00-5	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S57858.01 (continued)
Sample Tag: VAP-P2-M1101 (72-77')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (Replicate 01) (continued)								
Tetrachloroethene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	127-18-4	Y
Dibromochloromethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	124-48-1	Y
Chlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	108-90-7	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	79-34-5	Y
Ethylbenzene	20	ug/L	10	SW8260B	08/29/13 14:39	JGH	100-41-4	Y
p,m-Xylene	Not detected	ug/L	20	SW8260B	08/29/13 14:39	JGH		Y
o-Xylene	30	ug/L	10	SW8260B	08/29/13 14:39	JGH	95-47-6	Y
Styrene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	100-42-5	Y
Isopropylbenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	98-82-8	Y
Bromoform	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	75-25-2	Y
1,3-Dichlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	541-73-1	Y
1,4-Dichlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	106-46-7	Y
1,2-Dichlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	95-50-1	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	120-82-1	Y
1,2-Dibromoethane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	106-93-4	Y
1,2-Dibromo-3-chloropropane	Not detected	ug/L	10	SW8260B	08/29/13 14:39	JGH	96-12-8	Y

Y-Elevated reporting limit due to high target concentration

Merit Laboratories, Inc.
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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75711

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS US INC
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO. | P.O. NO. | QUOTE NO.
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com

INVOICE TO

CONTACT NAME: Accounting ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | E-MAIL ADDRESS

PROJECT NO./NAME: B006479.2013.00106 / RACER
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Tom Darmon

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☑ OTHER Actual 24hr

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL VOCs 8260	1,4 dioxane SIM
57858.01	8/28/13	1720	VAP-P2-MW101 (72-77')	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tom Darmon / ARCADIS ☐ Sampler DATE: 8/28/13 TIME: 1800
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Dropbox DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Tasha Trent DATE: 8/29/13 TIME: 800

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 6c 0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57841.01(01)
Generated on 08/28/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57841.01-S57841.02
Project: B0064479.2013.00106/ RACER
Collected Date: 08/28/2013
Submitted Date/Time: 08/28/2013 10:26
Sampled by: Thomas Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57841.01	VAP-P2-KP110 (65-70')	Groundwater	08/28/2013 09:15
S57841.02	VAP-P2-KP110 (77-82')	Groundwater	08/28/2013 10:10

Analytical Laboratory Report

Lab Sample ID: S57841.01
Sample Tag: VAP-P2-KP110 (65-70')
Collected Date/Time: 08/28/2013 09:15
Matrix: Groundwater
COC Reference: 75710

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 14:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/28/13 15:02	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 15:02	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 15:02	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 15:02	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 15:02	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	79-34-5	

Lab Sample ID: S57841.01 (continued)
Sample Tag: VAP-P2-KP110 (65-70')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 15:02	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 15:02	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57841.02
Sample Tag: VAP-P2-KP110 (77-82')
Collected Date/Time: 08/28/2013 10:10
Matrix: Groundwater
COC Reference: 75710

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/28/13 14:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	76-13-1	
Acetone	22	ug/L	10	SW8260B	08/28/13 15:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/28/13 15:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/28/13 15:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/28/13 15:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/28/13 15:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	56-23-5	
Benzene	2	ug/L	1	SW8260B	08/28/13 15:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	79-34-5	

Lab Sample ID: S57841.02 (continued)
Sample Tag: VAP-P2-KP110 (77-82')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/28/13 15:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/28/13 15:22	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75710

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS U.S. INC.
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO. | P.O. NO.
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com | QUOTE NO.

INVOICE TO

CONTACT NAME: Accounting | ☒ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | E-MAIL ADDRESS

PROJECT NO./NAME: B006479.2013.00106 / RACER
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Thomas Darmus /

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER Actual 24hr

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL VOCs 8260	1,4 dioxane SIM
57841.01	8/28/13	0915	VAP-P2-KP 110 (65-70')	GW	3		3						X	X
.02	8/28/13	1010	VAP-P2-KP110 (77-82')	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Tom Darmus / ARCADIS	☒ Sampler	8/28/13	1026
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Tabatha Frost	8/28/13	1536

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57820.01(01)
Generated on 08/28/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

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2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57820.01-S57820.02
Project: B0064479.2013.00106/ RACER
Collected Date: 08/27/2013
Submitted Date/Time: 08/27/2013 11:32
Sampled by: Thomas Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57820.01	VAP-P2-LY111 (72-77')	Groundwater	08/27/2013 11:00
S57820.02	VAP-P2-LY111 (67-69')	Soil	08/27/2013 11:26

Analytical Laboratory Report

Lab Sample ID: S57820.01
Sample Tag: VAP-P2-LY111 (72-77')
Collected Date/Time: 08/27/2013 11:00
Matrix: Groundwater
COC Reference: 75709

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/27/13 14:30	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/27/13 14:30	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	76-13-1	
Acetone	13	ug/L	10	SW8260B	08/27/13 15:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 15:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 15:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 15:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 15:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	56-23-5	
Benzene	1	ug/L	1	SW8260B	08/27/13 15:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	79-34-5	

Lab Sample ID: S57820.01 (continued)
Sample Tag: VAP-P2-LY111 (72-77')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 15:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 15:30	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57820.02
Sample Tag: VAP-P2-LY111 (67-69')
Collected Date/Time: 08/27/2013 11:26
Matrix: Soil
COC Reference: 75709

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.3	IR
1	4oz Glass	None	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Inorganics								
Total Solids	88	%	1	Std M 2540 B	08/27/13 18:00	ASB		
Organics - Volatiles								
TCL Volatile Organics HighLevl 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	76-13-1	
Acetone	Not detected	ug/kg	630	5035/8260B	08/27/13 14:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	630	5035/8260B	08/27/13 14:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	630	5035/8260B	08/27/13 14:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	156-59-2	
Chloroform	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	630	5035/8260B	08/27/13 14:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	630	5035/8260B	08/27/13 14:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	56-23-5	
Benzene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	10061-01-5	
Toluene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	79-34-5	

Lab Sample ID: S57820.02 (continued)
Sample Tag: VAP-P2-LY111 (67-69')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevl 5035/8260 (continued)								
Ethylbenzene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	5035/8260B	08/27/13 14:03	WAT		
o-Xylene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	95-47-6	
Styrene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	98-82-8	
Bromoform	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	60	5035/8260B	08/27/13 14:03	WAT	120-82-1	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75709

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS US INC
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO.: | P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com | QUOTE NO.:

INVOICE TO

CONTACT NAME: Accounting ☒ SAME
COMPANY:
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: B006479.2013.0016 / RACER
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Thomas Darmon

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER Actual 24hr

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL VOCs 8260	1,4 dioxane SIM
578220.01	8/27/13	1100	VAP-P2-LY111 (72-77')	GW	3		3						X	X
.02	8/27/13	1126	VAP-P2-LY111 (67-69')	S	1						1		X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE	TIME
Tom Darmon / ARCADIS		8/27/13	1130
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		8/27/13	1130
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 5.3

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57815.01(01)
Generated on 08/27/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57815.01
Project: B0064479.2013.00106/ RACER
Collected Date: 08/26/2013
Submitted Date/Time: 08/26/2013 15:27
Sampled by: Thomas Darmon
P.O. #: B0064479.2013.00106

Report Notes

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Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57815.01	VAP-P2-L091 (72-77')	Groundwater	08/26/2013 14:45

Analytical Laboratory Report

Lab Sample ID: S57815.01
Sample Tag: VAP-P2-L091 (72-77')
Collected Date/Time: 08/26/2013 14:45
Matrix: Groundwater
COC Reference: 75708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	>2	STD Units		N/A	08/26/13 16:10	LBR		
Organics - Volatiles								
1,4-Dioxane	106	ug/L	5	SW8260B - SIM	08/26/13 16:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	76-13-1	
Acetone	28	ug/L	10	SW8260B	08/26/13 21:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/26/13 21:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/26/13 21:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/26/13 21:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/26/13 21:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	56-23-5	
Benzene	1	ug/L	1	SW8260B	08/26/13 21:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	10061-01-5	
Toluene	1	ug/L	1	SW8260B	08/26/13 21:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	79-34-5	

Lab Sample ID: S57815.01 (continued)
Sample Tag: VAP-P2-L091 (72-77')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/26/13 21:06	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/26/13 21:06	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

75708

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS US INC
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO. | P.O. NO.
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com | QUOTE NO.

INVOICE TO

CONTACT NAME: Accounting | ☒ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | E-MAIL ADDRESS

PROJECT NO./NAME: B00644479.2013.00106 / RACER
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Thomas Darmon / [signature]
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER Actual 24 hr
DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL VOCs 8260	1,4 dioxane SIM
578115.01	8/26/13	1445	Vap-P2-L091 (72-77')	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Thomas Darmon / ARCADIS | ☒ Sampler | DATE: 8/26/13 | TIME: 1527
RECEIVED BY: SIGNATURE/ORGANIZATION | DATE | TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION | DATE | TIME
RECEIVED BY: SIGNATURE/ORGANIZATION | DATE | TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION | DATE | TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] | DATE: 8/26/13 | TIME: 1527

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57780.01(01)
Generated on 08/23/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57780.01-S57780.02
Project: B0064479.2013.00106
Collected Date: 08/22/2013
Submitted Date/Time: 08/23/2013 08:00
Sampled by: Thomas Darmon
P.O. #: B0064479.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57780.01	VAP-P2-LG111 (74'-77')	Groundwater	08/22/2013 16:28
S57780.02	VAP-P2-LG111 (80'-82')	Groundwater	08/22/2013 17:09

Analytical Laboratory Report

Lab Sample ID: S57780.01
Sample Tag: VAP-P2-LG111 (74'-77')
Collected Date/Time: 08/22/2013 16:28
Matrix: Groundwater
COC Reference: 75707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/23/13 15:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 15:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	76-13-1	
Acetone	15	ug/L	10	SW8260B	08/23/13 13:57	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 13:57	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 13:57	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 13:57	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 13:57	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	79-34-5	

Lab Sample ID: S57780.01 (continued)
Sample Tag: VAP-P2-LG111 (74'-77')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 13:57	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 13:57	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57780.02
Sample Tag: VAP-P2-LG111 (80'-82')
Collected Date/Time: 08/22/2013 17:09
Matrix: Groundwater
COC Reference: 75707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/23/13 15:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/23/13 15:27	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 14:17	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 14:17	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 14:17	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 14:17	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 14:17	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	79-34-5	

Lab Sample ID: S57780.02 (continued)
Sample Tag: VAP-P2-LG111 (80'-82')

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 14:17	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 14:17	WAT	96-12-8	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75707

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS U.S. INC.
ADDRESS: 10559 Citation Dr., Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1926 FAX NO.: 810-229-8837 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: Accounting SAME
COMPANY:
ADDRESS:
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: B0064479.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Thomas Darnow

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☒ OTHER Actual 24hr

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL VOCs 8260	1,4-dioxane SIM
57780.01	8/22/13	1628	VAP-P2-LG111 (74'-77')	GW	3		3						X	X
.02	8/22/13	1709	VAP-P2-LG111 (80'-82')	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tom Darnow ☑ Sampler DATE: 8/22/13 TIME: 1800
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Dropbox DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Faust DATE: 8/23/13 TIME: 800

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57406.01(01)
Generated on 07/29/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57406.01
Project: B0064480.2013.00106/ RACER Plant 3
Collected Date: 07/26/2013
Submitted Date/Time: 07/26/2013 14:30
Sampled by: Unknown
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57406.01	VAP-P3-IC89 (69.5-72.5)	Groundwater	07/26/2013 13:35

Analytical Laboratory Report

Lab Sample ID: S57406.01
Sample Tag: VAP-P3-IC89 (69.5-72.5)
Collected Date/Time: 07/26/2013 13:35
Matrix: Groundwater
COC Reference: 82032

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
4	40ml Glass	HCL	Yes	5.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	07/29/13 10:40	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	07/26/13 15:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	07/26/13 17:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/26/13 17:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/26/13 17:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/26/13 17:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/26/13 17:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	79-34-5	

Lab Sample ID: S57406.01 (continued)
Sample Tag: VAP-P3-IC89 (69.5-72.5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/26/13 17:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/26/13 17:19	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

82032

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Ste 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.:
E-MAIL ADDRESS: Randy.christensen@arcadis-us.com
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: BC064480.2013.00106 / RALEX Plant 3
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☒ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER
True 24 hr

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	1,4 Dioxane SIMs	Special Instructions
57406.01	7-26-13	1335	VAP-P3-IC89 (69.5-72.5)	GW	4		4								Extra bottles

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Christen Sipes ARCADIS ☒ Sampler DATE: 7-26-13 TIME: 1405
RECEIVED BY: SIGNATURE/ORGANIZATION: Mer DATE: 7.26.13 TIME: 1405

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Mer DATE: 7.26.13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabitha Faust DATE: 7-26-13 TIME: 1430

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57386.01(01)
Generated on 07/26/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57386.01
Project: B0064480.2013.00106/ RACER Plant 3
Collected Date: 07/25/2013
Submitted Date/Time: 07/25/2013 16:45
Sampled by: Christine Snyder
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57386.01	VAP-P3-IR43 (69.5-73.5)	Groundwater	07/25/2013 15:15

Analytical Laboratory Report

Lab Sample ID: S57386.01
Sample Tag: VAP-P3-IR43 (69.5-73.5)
Collected Date/Time: 07/25/2013 15:15
Matrix: Groundwater
COC Reference: 82031

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	07/26/13 10:45	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	07/25/13 17:42	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	07/25/13 20:40	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/25/13 20:40	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/25/13 20:40	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/25/13 20:40	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/25/13 20:40	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	79-34-5	

Lab Sample ID: S57386.01 (continued)
Sample Tag: VAP-P3-IR43 (69.5-73.5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/25/13 20:40	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/25/13 20:40	JGH	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

82031

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Ste 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0044480.2013.00106/RACER Plant 3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Christine Snyder/Christine Snyder
TURNAROUND TIME REQUIRED: ☒ 1 DAY True 24hr ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER
DELIVERABLES REQUIRED: ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs 14 Dioxane SIM
57386.01	7-25-13	1515	VAP-P3-IR43 (69.5-73.5)	GW	3		3						

Christine Snyder 7-25-13

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Christine Snyder/ARCADIS ☒ Sampler	DATE: 7/25/13	TIME: 1645	RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE / TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME	RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Fawn A	DATE: 7/25/13 TIME: 1645
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS	NOTES: TEMP. ON ARRIVAL 4.6
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME	SEAL NO. / SEAL INTACT YES ☐ NO ☐ / INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57363.01(01)
Generated on 07/25/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57363.01
Project: B0064480.2013.00106/ RACER Plant 3
Collected Date: 07/24/2013
Submitted Date/Time: 07/25/2013 08:00
Sampled by: Christine Snyder
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57363.01	VAP-P3-IS88 (71-76)	Groundwater	07/24/2013 16:05

Analytical Laboratory Report

Lab Sample ID: S57363.01
Sample Tag: VAP-P3-IS88 (71-76)
Collected Date/Time: 07/24/2013 16:05
Matrix: Groundwater
COC Reference: 75069

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	07/25/13 17:07	JGH		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	07/25/13 15:43	JGH	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	07/25/13 16:51	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/25/13 16:51	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/25/13 16:51	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/25/13 16:51	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/25/13 16:51	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	79-34-5	

Lab Sample ID: S57363.01 (continued)
Sample Tag: VAP-P3-IS88 (71-76)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/25/13 16:51	JGH		
o-Xylene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/25/13 16:51	JGH	96-12-8	

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C.O.C. PAGE # 1 OF 1

75069

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Ste 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO. | P.O. NO. | QUOTE NO.
E-MAIL ADDRESS: Randy.christensen@arcadis-us.com

INVOICE TO

CONTACT NAME | ☐ SAME
COMPANY
ADDRESS
CITY | STATE | ZIP CODE
PHONE NO. | E-MAIL ADDRESS

PROJECT NO./NAME: B0064480.2013.00106 / RACER Plant 3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Christine Snyder / Christine Snyder

TURNAROUND TIME REQUIRED ☒ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC's	1-4 Dioxane SIMs
57363.00	7-24-13 1605	1605	VAP-P3-IS88 (7-76)	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION: Christine Snyder / ARCADIS		7-24-13 DATE	1810 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Dropbox / Tabitha Frost		7/25/13 DATE	800 TIME

SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS
SEAL NO. | SEAL INTACT YES ☐ NO ☐ | INITIALS

NOTES: TEMP. ON ARRIVAL 3.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57337.01(01)
Generated on 07/24/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57337.01
Project: B0064480.2013.00106/ RACER Plant 3
Collected Date: 07/23/2013
Submitted Date/Time: 07/23/2013 12:20
Sampled by: Christine Snyder
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

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Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57337.01	VAP-P3-IS63 (70-76)	Groundwater	07/23/2013 11:10

Analytical Laboratory Report

Lab Sample ID: S57337.01
Sample Tag: VAP-P3-IS63 (70-76)
Collected Date/Time: 07/23/2013 11:10
Matrix: Groundwater
COC Reference: 75067

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	07/24/13 12:30	WAT		
Organics - Volatiles								
1,4-Dioxane	35	ug/L	5	SW8260B - SIM	07/23/13 16:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	07/23/13 14:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	07/23/13 14:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	07/23/13 14:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	07/23/13 14:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	07/23/13 14:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	79-34-5	

Lab Sample ID: S57337.01 (continued)
Sample Tag: VAP-P3-IS63 (70-76)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	07/23/13 14:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	07/23/13 14:51	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

75067

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Ste 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1940 FAX NO.:
E-MAIL ADDRESS: Randy.christensen@arcadis-us.com
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: BD064480.2013.00106 / RALER Plant 3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Christine Snyder / Christine Snyder
TURNAROUND TIME REQUIRED: ☒ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER
DELIVERABLES REQUIRED: ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	1,4-dioxane SIMs
57337.01	7/23/13	1110	VAP-P3-IS63 (70-76)	GW	3		3						X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Christine Snyder/ARCADIS ☒ Sampler DATE: 7/23/13 TIME: 1220
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Frost DATE: 7/23/13 TIME: 1220

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59539.01(01)
Generated on 01/02/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59539.01-S59539.03
Project: Plant 3
Collected Date: 12/20/2013
Submitted Date/Time: 12/27/2013 10:00
Sampled by: Cliff Walls
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59539.01	Trip Blank	Groundwater	12/20/2013 07:00
S59539.02	MW-13-49 (12-20-13)	Groundwater	12/20/2013 11:05
S59539.03	Equipment Blank 1	Groundwater	12/20/2013 11:20

Analytical Laboratory Report

Lab Sample ID: S59539.01
Sample Tag: Trip Blank
Collected Date/Time: 12/20/2013 07:00
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/31/13 12:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/31/13 15:11	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/28/13 20:15	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/28/13 20:15	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/28/13 20:15	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/28/13 20:15	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/28/13 20:15	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	79-34-5	

Lab Sample ID: S59539.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/28/13 20:15	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/28/13 20:15	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59539.02
Sample Tag: MW-13-49 (12-20-13)
Collected Date/Time: 12/20/2013 11:05
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/27/13 17:53	EMR		
Mercury Digestion	Completed			SW7471B	12/30/13 11:30	CCM		
Mercury Digestion	Completed			SW7471B	12/30/13 11:30	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
pH check for VOCs	<2	STD Units		N/A	12/31/13 12:50	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020A	12/30/13 14:57	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	12/30/13 14:55	PER	7440-38-2	
Barium, Dissolved	0.134	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7440-39-3	
Barium	0.140	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7440-39-3	
Boron, Dissolved	0.15	mg/L	0.04	SW6020A	12/30/13 14:57	PER	7440-42-8	
Boron	0.14	mg/L	0.04	SW6020A	12/30/13 14:55	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:57	PER	7440-43-9	
Cadmium	0.0027	mg/L	0.0005	SW6020A	12/30/13 14:55	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7440-47-3	
Chromium	0.008	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7440-50-8	
Copper	0.009	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 14:57	PER	7439-92-1	
Lead	0.004	mg/L	0.003	SW6020A	12/30/13 14:55	PER	7439-92-1	
Manganese, Dissolved	0.394	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7439-96-5	
Manganese	0.384	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/30/13 14:33	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/30/13 14:29	CCM	7439-97-6	
Nickel, Dissolved	0.033	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7440-02-0	
Nickel	0.042	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:57	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:55	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 14:57	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 14:55	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020A	12/30/13 14:57	PER	7440-66-6	
Zinc	0.118	mg/L	0.005	SW6020A	12/30/13 14:55	PER	7440-66-6	

Lab Sample ID: S59539.02 (continued)
Sample Tag: MW-13-49 (12-20-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 15:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	12/30/13 15:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	88-75-5	

Lab Sample ID: S59539.02 (continued)
Sample Tag: MW-13-49 (12-20-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 15:46	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/31/13 15:29	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	76-13-1	
Acetone	13	ug/L	10	SW8260C	12/28/13 20:35	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/28/13 20:35	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/28/13 20:35	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/28/13 20:35	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/28/13 20:35	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	56-23-5	
Benzene	14	ug/L	1	SW8260C	12/28/13 20:35	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	108-87-2	

Lab Sample ID: S59539.02 (continued)
Sample Tag: MW-13-49 (12-20-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	10061-01-5	
Toluene	9	ug/L	1	SW8260C	12/28/13 20:35	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	79-34-5	
Ethylbenzene	1	ug/L	1	SW8260C	12/28/13 20:35	JGH	100-41-4	
p,m-Xylene	2	ug/L	2	SW8260C	12/28/13 20:35	JGH		
o-Xylene	2	ug/L	1	SW8260C	12/28/13 20:35	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/28/13 20:35	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59539.03
Sample Tag: Equipment Blank 1
Collected Date/Time: 12/20/2013 11:20
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/27/13 17:53	EMR		
Mercury Digestion	Completed			SW7471B	12/30/13 11:30	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
pH check for VOCs	<2	STD Units		N/A	12/31/13 12:50	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/30/13 14:32	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020A	12/30/13 14:32	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:32	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 14:32	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/30/13 14:31	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:32	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 14:32	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/30/13 14:32	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	91-58-7	

Lab Sample ID: S59539.03 (continued)
Sample Tag: Equipment Blank 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 16:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 16:20	PL	118-74-1	

Lab Sample ID: S59539.03 (continued)
Sample Tag: Equipment Blank 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/31/13 15:47	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/28/13 20:56	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/28/13 20:56	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/28/13 20:56	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/28/13 20:56	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/28/13 20:56	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/28/13 20:56	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	120-82-1	

Lab Sample ID: S59539.03 (continued)
Sample Tag: Equipment Blank 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/28/13 20:56	JGH	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	Arcadis
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810 225 1949
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	Randy.Christensen@arcadis-us.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☑ SAME
COMPANY	
ADDRESS	
CITY	STATE / ZIP CODE
PHONE NO.	E-MAIL ADDRESS

PROJECT NO./NAME: Plant 3

SAMPLER(S): PLEASE PRINT/SIGN NAME: Cliff Wahl

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 01 1-4 SIM	TAL Metals	SVOCs	Diss TAL Metals
59539.01	12-20	7:00	Trip Blank	GW		1							X			
.02	12-20	11:05	MW-13-49 (12-20-13)	GW	7	2	3	2					X	X	X	X
.03	12-20	11:00	Equipment Blank 1	GW	6	2	3	1					X	X	X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE 12-20	TIME 15:00
RECEIVED BY: SIGNATURE/ORGANIZATION PME Shaw		DATE 12-20	TIME 16:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION PME Shaw		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Heather Ball		DATE 12/23/13	TIME 13:00
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 6.18.12

Analytical Laboratory Report

Report ID: S59494.01(01)
Generated on 01/02/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

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Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59494.01-S59494.02
Project: Plant 6
Collected Date: 12/18/2013
Submitted Date/Time: 12/19/2013 11:00
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59494.01	Trip Blank	Groundwater	12/18/2013 07:00
S59494.02	MW-13-36R (12-18-13)	Groundwater	12/18/2013 14:20

Analytical Laboratory Report

Lab Sample ID: S59494.01
Sample Tag: Trip Blank
Collected Date/Time: 12/18/2013 07:00
Matrix: Groundwater
COC Reference: 75156

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/20/13 10:25	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 18:26	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/19/13 18:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/19/13 18:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/19/13 18:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/19/13 18:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/19/13 18:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	79-34-5	

Lab Sample ID: S59494.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/19/13 18:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/19/13 18:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59494.02
Sample Tag: MW-13-36R (12-18-13)
Collected Date/Time: 12/18/2013 14:20
Matrix: Groundwater
COC Reference: 75156

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR
2	1L Amber	None	Yes	5.6	IR
2	125ml Plastic	HNO3	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/20/13 15:51	EMR		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
pH check for VOCs	<2	STD Units		N/A	12/20/13 10:25	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020A	12/30/13 14:53	PER	7440-38-2	
Arsenic	0.003	mg/L	0.002	SW6020A	12/30/13 14:51	PER	7440-38-2	
Barium, Dissolved	0.070	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7440-39-3	
Barium	0.064	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7440-39-3	
Boron, Dissolved	0.13	mg/L	0.04	SW6020A	12/30/13 14:53	PER	7440-42-8	
Boron	0.13	mg/L	0.04	SW6020A	12/30/13 14:51	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:53	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:51	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7440-50-8	
Copper	0.006	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 14:53	PER	7439-92-1	
Lead	0.003	mg/L	0.003	SW6020A	12/30/13 14:51	PER	7439-92-1	
Manganese, Dissolved	0.031	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7439-96-5	
Manganese	0.021	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:50	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:48	CCM	7439-97-6	
Nickel, Dissolved	0.013	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7440-02-0	
Nickel	0.012	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:53	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:51	PER	7440-22-4	
Vanadium, Dissolved	0.005	mg/L	0.004	SW6020A	12/30/13 14:53	PER	7440-62-2	
Vanadium	0.005	mg/L	0.004	SW6020A	12/30/13 14:51	PER	7440-62-2	
Zinc, Dissolved	0.019	mg/L	0.005	SW6020A	12/30/13 14:53	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020A	12/30/13 14:51	PER	7440-66-6	

Lab Sample ID: S59494.02 (continued)
Sample Tag: MW-13-36R (12-18-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	120-83-2	
2,4-Dimethylphenol	3	ug/L	1	SW8270D	12/30/13 19:46	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 19:46	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270D	12/30/13 19:46	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	95-48-7	
3-, 4-Methylphenol	1	ug/L	1	SW8270D	12/30/13 19:46	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	88-75-5	

Lab Sample ID: S59494.02 (continued)
Sample Tag: MW-13-36R (12-18-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	86-30-6	
Naphthalene	2	ug/L	1	SW8270D	12/30/13 19:46	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	87-86-5	
Phenanthrene	1	ug/L	1	SW8270D	12/30/13 19:46	PL	85-01-8	
Phenol	8	ug/L	1	SW8270D	12/30/13 19:46	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 19:46	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 18:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/19/13 18:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/19/13 18:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/19/13 18:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/19/13 18:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/19/13 18:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	108-87-2	

Lab Sample ID: S59494.02 (continued)
Sample Tag: MW-13-36R (12-18-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/19/13 18:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/19/13 18:29	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75156

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 225 1949 FAX NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com
P.O. NO.:
QUOTE NO.:

INVOICE TO

☑ SAME

CONTACT NAME:
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wallis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 01 1-4 SIM	TAL Metals	Hg TAL Metals	SVOCs
59494.01	1218	7:00	Trip Blank	GW	1		1						x			
.02	1218	14:20	MW-13-36R (1218-13)	GW	7	2	3	2					x	x	x	x

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
Cliff Wallis		1218	18:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
PME Storage		12/18	18:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
PME Storage			
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Mer		12-19-13	10

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Mer	12-19-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Kevin George	12/19/13	1100

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL 5.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59488.01(01)
Generated on 01/02/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59488.01-S59488.02
Project: Racer Plant 6
Collected Date: 12/17/2013
Submitted Date/Time: 12/18/2013 13:00
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59488.01	Trip Blank	Groundwater	12/17/2013 07:00
S59488.02	MW-13-53 (12-17-13)	Groundwater	12/17/2013 09:50

Analytical Laboratory Report

Lab Sample ID: S59488.01
Sample Tag: Trip Blank
Collected Date/Time: 12/17/2013 07:00
Matrix: Groundwater
COC Reference: 75153

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/19/13 10:24	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 17:50	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/18/13 16:44	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/18/13 16:44	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/18/13 16:44	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/18/13 16:44	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/18/13 16:44	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	79-34-5	

Lab Sample ID: S59488.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/18/13 16:44	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/18/13 16:44	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59488.02
Sample Tag: MW-13-53 (12-17-13)
Collected Date/Time: 12/17/2013 09:50
Matrix: Groundwater
COC Reference: 75153

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
pH check for VOCs	<2	STD Units		N/A	12/19/13 10:29	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7440-36-0	
Arsenic, Dissolved	0.009	mg/L	0.002	SW6020A	12/30/13 14:49	PER	7440-38-2	
Arsenic	0.009	mg/L	0.002	SW6020A	12/30/13 14:47	PER	7440-38-2	
Barium, Dissolved	0.230	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7440-39-3	
Barium	0.226	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020A	12/30/13 14:49	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020A	12/30/13 14:47	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:49	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:47	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7440-47-3	
Chromium	0.007	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 14:49	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 14:47	PER	7439-92-1	
Manganese, Dissolved	0.108	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7439-96-5	
Manganese	0.141	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:46	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:44	CCM	7439-97-6	
Nickel, Dissolved	0.017	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7440-02-0	
Nickel	0.023	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:49	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:47	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 14:49	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 14:47	PER	7440-62-2	
Zinc, Dissolved	0.008	mg/L	0.005	SW6020A	12/30/13 14:49	PER	7440-66-6	
Zinc	0.009	mg/L	0.005	SW6020A	12/30/13 14:47	PER	7440-66-6	

Lab Sample ID: S59488.02 (continued)
Sample Tag: MW-13-53 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 19:12	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	12/30/13 19:12	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	88-75-5	

Lab Sample ID: S59488.02 (continued)
Sample Tag: MW-13-53 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 19:12	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 18:08	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/18/13 17:06	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/18/13 17:06	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/18/13 17:06	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/18/13 17:06	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/18/13 17:06	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	108-87-2	

Lab Sample ID: S59488.02 (continued)
Sample Tag: MW-13-53 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/18/13 17:06	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/18/13 17:06	JGH	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

75153

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 225 1949 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Racer Plant 6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wallis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 011-SIM	TAL Metal	Diss TAL Metal	SVOCs
59488.01	12.17	7:00	Trip Blank	GW	1		1						X			
.02	12.17	9:50	MW-13-53 (12-17-13)	GW	7	2	3	2					X	X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
		12-17-13	18:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RME Storage		12-17-13	18:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RME Storage		12/18/13	10 AM
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Josiah Meerstein		12/18/13	10 AM

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Josiah Meerstein	12/18/13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Kevin George	12/18/13	1300

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59487.01(01)
Generated on 01/02/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59487.01-S59487.02
Project: Plant 2
Collected Date: 12/17/2013
Submitted Date/Time: 12/18/2013 13:00
Sampled by: Cliff Walls
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59487.01	Trip Blank	Groundwater	12/17/2013 07:00
S59487.02	MW-13-42 (12-17-13)	Groundwater	12/17/2013 12:05

Analytical Laboratory Report

Lab Sample ID: S59487.01
Sample Tag: Trip Blank
Collected Date/Time: 12/17/2013 07:00
Matrix: Groundwater
COC Reference: 75154

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/19/13 10:24	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 17:14	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/18/13 16:00	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/18/13 16:00	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/18/13 16:00	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/18/13 16:00	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/18/13 16:00	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	79-34-5	

Lab Sample ID: S59487.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/18/13 16:00	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/18/13 16:00	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59487.02
Sample Tag: MW-13-42 (12-17-13)
Collected Date/Time: 12/17/2013 12:05
Matrix: Groundwater
COC Reference: 75154

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:45	JRH		
pH check for VOCs	<2	STD Units		N/A	12/19/13 10:24	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/30/13 14:45	PER	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020A	12/30/13 14:41	PER	7440-38-2	
Barium, Dissolved	0.055	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7440-39-3	
Barium	0.106	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020A	12/30/13 14:45	PER	7440-42-8	
Boron	0.08	mg/L	0.04	SW6020A	12/30/13 14:41	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:45	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:41	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7440-47-3	
Chromium	0.276	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7440-48-4	
Cobalt	0.016	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7440-50-8	
Copper	0.029	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 14:45	PER	7439-92-1	
Lead	0.008	mg/L	0.003	SW6020A	12/30/13 14:41	PER	7439-92-1	
Manganese, Dissolved	0.256	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7439-96-5	
Manganese	0.776	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:42	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:40	CCM	7439-97-6	
Nickel, Dissolved	0.038	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7440-02-0	
Nickel	0.249	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:45	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:41	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 14:45	PER	7440-62-2	
Vanadium	0.016	mg/L	0.004	SW6020A	12/30/13 14:41	PER	7440-62-2	
Zinc, Dissolved	0.021	mg/L	0.005	SW6020A	12/30/13 14:45	PER	7440-66-6	
Zinc	0.113	mg/L	0.005	SW6020A	12/30/13 14:41	PER	7440-66-6	

Lab Sample ID: S59487.02 (continued)
Sample Tag: MW-13-42 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 18:38	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	88-75-5	

Lab Sample ID: S59487.02 (continued)
Sample Tag: MW-13-42 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 18:38	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	6	ug/L	5	SW8260B - SIM	12/20/13 17:32	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/18/13 16:22	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/18/13 16:22	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/18/13 16:22	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/18/13 16:22	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/18/13 16:22	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	108-87-2	

Lab Sample ID: S59487.02 (continued)
Sample Tag: MW-13-42 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/18/13 16:22	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/18/13 16:22	JGH	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75154

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 225 1749 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 2
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wilcs

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 8011-4 SM	TAL metals	Miss TAL Metals	SVOCs
59487.01	12-17	7:00	TRIP Blank	GW	1								X			
.02	12-17	12:05	MW-13-42 (12-12-13)	GW	7	2	3	2					X	X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
		12-17-13	18:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
PME Stevens		12-17-13	18:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
PME Stevens		12/18/13	10:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Isaiah Mendoza		12/18/13	10:00

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Isaiah Mendoza	12/18/13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Kevin George	12/18/13	1300

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59486.01(01)
Generated on 01/02/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59486.01-S59486.03
Project: Plant 6
Collected Date: 12/17/2013
Submitted Date/Time: 12/18/2013 13:00
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59486.01	Trip Blank	Groundwater	12/17/2013 07:00
S59486.02	MW-13-41 (12-17-13)	Groundwater	12/17/2013 14:40
S59486.03	MW-13-40 (12-17-13)	Groundwater	12/17/2013 16:35

Analytical Laboratory Report

Lab Sample ID: S59486.01
Sample Tag: Trip Blank
Collected Date/Time: 12/17/2013 07:00
Matrix: Groundwater
COC Reference: 75155

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/19/13 10:24	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 16:19	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/18/13 14:54	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/18/13 14:54	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/18/13 14:54	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/18/13 14:54	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/18/13 14:54	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	79-34-5	

Lab Sample ID: S59486.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/18/13 14:54	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/18/13 14:54	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59486.02
Sample Tag: MW-13-41 (12-17-13)
Collected Date/Time: 12/17/2013 14:40
Matrix: Groundwater
COC Reference: 75155

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/19/13 10:24	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7440-36-0	
Arsenic, Dissolved	0.016	mg/L	0.002	SW6020A	12/30/13 14:11	PER	7440-38-2	
Arsenic	0.018	mg/L	0.002	SW6020A	12/30/13 14:09	PER	7440-38-2	
Barium, Dissolved	0.066	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7440-39-3	
Barium	0.076	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7440-39-3	
Boron, Dissolved	0.21	mg/L	0.04	SW6020A	12/30/13 14:11	PER	7440-42-8	
Boron	0.22	mg/L	0.04	SW6020A	12/30/13 14:09	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:11	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:09	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7440-47-3	
Chromium	0.006	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7440-48-4	
Cobalt	0.006	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7440-50-8	
Copper	0.005	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 14:11	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 14:09	PER	7439-92-1	
Manganese, Dissolved	0.055	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7439-96-5	
Manganese	0.088	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:21	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:19	CCM	7439-97-6	
Nickel, Dissolved	0.028	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7440-02-0	
Nickel	0.030	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7782-49-2	
Selenium	0.009	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:11	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:09	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 14:11	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 14:09	PER	7440-62-2	
Zinc, Dissolved	0.007	mg/L	0.005	SW6020A	12/30/13 14:11	PER	7440-66-6	
Zinc	0.010	mg/L	0.005	SW6020A	12/30/13 14:09	PER	7440-66-6	

Lab Sample ID: S59486.02 (continued)
Sample Tag: MW-13-41 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 17:29	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	88-75-5	

Lab Sample ID: S59486.02 (continued)
Sample Tag: MW-13-41 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 17:29	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	13	ug/L	5	SW8260B - SIM	12/20/13 16:37	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/18/13 15:16	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/18/13 15:16	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/18/13 15:16	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/18/13 15:16	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/18/13 15:16	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	108-87-2	

Lab Sample ID: S59486.02 (continued)
Sample Tag: MW-13-41 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/18/13 15:16	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/18/13 15:16	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59486.03
Sample Tag: MW-13-40 (12-17-13)
Collected Date/Time: 12/17/2013 16:35
Matrix: Groundwater
COC Reference: 75155

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Mercury Digestion	Completed			SW7471B	12/20/13 10:30	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/19/13 10:24	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7440-36-0	
Arsenic, Dissolved	0.015	mg/L	0.002	SW6020A	12/30/13 14:07	PER	7440-38-2	
Arsenic	0.015	mg/L	0.002	SW6020A	12/30/13 14:02	PER	7440-38-2	
Barium, Dissolved	0.290	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7440-39-3	
Barium	0.288	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020A	12/30/13 14:07	PER	7440-42-8	
Boron	0.07	mg/L	0.04	SW6020A	12/30/13 14:02	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:07	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:02	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7440-47-3	
Chromium	0.007	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 14:07	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 14:02	PER	7439-92-1	
Manganese, Dissolved	0.156	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7439-96-5	
Manganese	0.161	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:38	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/20/13 15:36	CCM	7439-97-6	
Nickel, Dissolved	0.029	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7440-02-0	
Nickel	0.031	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:07	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 14:02	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 14:07	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 14:02	PER	7440-62-2	
Zinc, Dissolved	0.007	mg/L	0.005	SW6020A	12/30/13 14:07	PER	7440-66-6	
Zinc	0.010	mg/L	0.005	SW6020A	12/30/13 14:02	PER	7440-66-6	

Lab Sample ID: S59486.03 (continued)
Sample Tag: MW-13-40 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 18:04	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	88-75-5	

Lab Sample ID: S59486.03 (continued)
Sample Tag: MW-13-40 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 18:04	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 16:56	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/18/13 15:38	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/18/13 15:38	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/18/13 15:38	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/18/13 15:38	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/18/13 15:38	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	108-87-2	

Lab Sample ID: S59486.03 (continued)
Sample Tag: MW-13-40 (12-17-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/18/13 15:38	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/18/13 15:38	JGH	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75155

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 225 1949 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

☑ SAME

CONTACT NAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: Plant 6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Watts

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC	TAL Mass. Metal	TAL Metal	SVOCs
59486.01	12-17	7:00	TRIP BLANK	GW	1		1						X			
.02	12-17	14:40	MW-13-41C (12-17-13)	GW	7	2	3	2					X	X	X	X
.03	12-17	16:35	MW-13-40 (12-17-13)	GW	7	2	3	2					X	X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE	TIME
Cliff Watts		12-17-13	16:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
FME Stone		12-17-13	18:20
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
FME Stone		12/18/13	10AM
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Tracie Allenstein		12/18/13	10AM

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Tracie Allenstein	12/18/13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Karim George	12/18/13	1320

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59457.01(01)
Generated on 12/30/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59457.01-S59457.02
Project: Plant 2
Collected Date: 12/16/2013
Submitted Date/Time: 12/17/2013 09:30
Sampled by: Cliff Walls
P.O. #: B0064479.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59457.01	Trip Blank	Groundwater	12/16/2013 07:00
S59457.02	MW-13-51 (12-16-13)	Groundwater	12/16/2013 11:30

Analytical Laboratory Report

Lab Sample ID: S59457.01
Sample Tag: Trip Blank
Collected Date/Time: 12/16/2013 07:00
Matrix: Groundwater
COC Reference: 78505

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/17/13 13:40	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/17/13 15:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 20:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 20:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 20:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 20:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 20:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	79-34-5	

Lab Sample ID: S59457.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 20:09	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 20:09	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59457.02
Sample Tag: MW-13-51 (12-16-13)
Collected Date/Time: 12/16/2013 11:30
Matrix: Groundwater
COC Reference: 78505

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.9	IR
2	1L Amber	None	Yes	5.9	IR
2	125ml Plastic	HNO3	Yes	5.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/19/13 10:45	CCM		
Mercury Digestion	Completed			SW7471B	12/19/13 10:45	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/17/13 13:53	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020A	12/30/13 13:54	PER	7440-38-2	
Arsenic	0.006	mg/L	0.002	SW6020A	12/30/13 13:49	PER	7440-38-2	
Barium, Dissolved	0.163	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7440-39-3	
Barium	0.174	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7440-39-3	
Boron, Dissolved	Not detected	mg/L	0.04	SW6020A	12/30/13 13:54	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020A	12/30/13 13:49	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:54	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:49	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7440-47-3	
Chromium	0.017	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7440-50-8	
Copper	0.008	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 13:54	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 13:49	PER	7439-92-1	
Manganese, Dissolved	0.296	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7439-96-5	
Manganese	0.329	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/19/13 15:28	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/19/13 15:26	CCM	7439-97-6	
Nickel, Dissolved	0.026	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7440-02-0	
Nickel	0.028	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:54	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:49	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 13:54	PER	7440-62-2	
Vanadium	0.005	mg/L	0.004	SW6020A	12/30/13 13:49	PER	7440-62-2	
Zinc, Dissolved	0.012	mg/L	0.005	SW6020A	12/30/13 13:54	PER	7440-66-6	
Zinc	0.024	mg/L	0.005	SW6020A	12/30/13 13:49	PER	7440-66-6	

Lab Sample ID: S59457.02 (continued)
Sample Tag: MW-13-51 (12-16-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/20/13 19:18	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	12/20/13 19:18	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	88-75-5	

Lab Sample ID: S59457.02 (continued)
Sample Tag: MW-13-51 (12-16-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/20/13 19:18	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/17/13 15:43	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 20:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 20:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 20:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 20:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 20:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	108-87-2	

Lab Sample ID: S59457.02 (continued)
Sample Tag: MW-13-51 (12-16-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 20:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 20:31	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

78505

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME	Randy Christensen
COMPANY	Arcadis
ADDRESS	10559 Citation Drive Suite 100
CITY	Brighton
STATE	MI
ZIP CODE	48116
PHONE NO.	810 2251991
FAX NO.	
P.O. NO.	
E-MAIL ADDRESS	Randy.Christensen@arcadis.com
QUOTE NO.	

INVOICE TO

CONTACT NAME	☑ SAME
COMPANY	
ADDRESS	
CITY	
STATE	
ZIP CODE	
PHONE NO.	
E-MAIL ADDRESS	

PROJECT NO./NAME: Plant 2

SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Curtis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL Metals	Miss TAL Metals	TCL VOC DI 1-4 Dioxane	SVOCs
59457.01	12/6/13	7:00	Trip Blank	GW	1		1								X	
.02	12/6/13	11:30	MW-13-51 (12/6/13)	GW	7	2	3	2					X	X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Cliff Curtis	☐ Sampler DATE	12-16-13 TIME 17:30
RECEIVED BY: SIGNATURE/ORGANIZATION	ME Storage	DATE	12.16.13 TIME 17:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION	ME Storage	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Mel	DATE	12-17-13 TIME 850

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	12.17.13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE	12/17/13 TIME 930

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59456.01(01)
Generated on 12/30/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59456.01-S59456.03
Project: Plant 6
Collected Date: 12/16/2013
Submitted Date/Time: 12/17/2013 09:30
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59456.01	Trip Blank	Groundwater	12/16/2013 07:00
S59456.02	MW-13-50	Groundwater	12/16/2013 15:50
S59456.03	Duplicate 1	Groundwater	12/16/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S59456.01
Sample Tag: Trip Blank
Collected Date/Time: 12/16/2013 07:00
Matrix: Groundwater
COC Reference: 78504

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/17/13 13:40	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/17/13 14:31	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 19:03	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 19:03	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 19:03	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 19:03	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 19:03	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	79-34-5	

Lab Sample ID: S59456.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 19:03	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 19:03	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59456.02
Sample Tag: MW-13-50
Collected Date/Time: 12/16/2013 15:50
Matrix: Groundwater
COC Reference: 78504

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.9	IR
2	1L Amber	None	Yes	5.9	IR
2	125ml Plastic	HNO3	Yes	5.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/19/13 10:45	CCM		
Mercury Digestion	Completed			SW7471B	12/19/13 10:45	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/17/13 13:40	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020A	12/30/13 13:43	PER	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020A	12/30/13 13:41	PER	7440-38-2	
Barium, Dissolved	0.172	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7440-39-3	
Barium	0.175	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020A	12/30/13 13:43	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020A	12/30/13 13:41	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:43	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:41	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 13:43	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 13:41	PER	7439-92-1	
Manganese, Dissolved	0.113	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7439-96-5	
Manganese	0.117	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/19/13 15:22	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/19/13 15:20	CCM	7439-97-6	
Nickel, Dissolved	0.006	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7440-02-0	
Nickel	0.007	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:43	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:41	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 13:43	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 13:41	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:43	PER	7440-66-6	
Zinc	0.012	mg/L	0.005	SW6020A	12/30/13 13:41	PER	7440-66-6	

Lab Sample ID: S59456.02 (continued)
Sample Tag: MW-13-50

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/20/13 18:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	88-75-5	

Lab Sample ID: S59456.02 (continued)
Sample Tag: MW-13-50

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/20/13 18:09	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/17/13 14:49	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 19:25	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 19:25	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 19:25	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 19:25	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 19:25	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	108-87-2	

Lab Sample ID: S59456.02 (continued)
Sample Tag: MW-13-50

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 19:25	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 19:25	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59456.03
Sample Tag: Duplicate 1
Collected Date/Time: 12/16/2013 00:01
Matrix: Groundwater
COC Reference: 78504

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.9	IR
2	1L Amber	None	Yes	5.9	IR
2	125ml Plastic	HNO3	Yes	5.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/19/13 10:45	CCM		
Mercury Digestion	Completed			SW7471B	12/19/13 10:45	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/17/13 13:40	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020A	12/30/13 13:47	PER	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020A	12/30/13 13:45	PER	7440-38-2	
Barium, Dissolved	0.172	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7440-39-3	
Barium	0.181	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020A	12/30/13 13:47	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020A	12/30/13 13:45	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:47	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:45	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 13:47	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 13:45	PER	7439-92-1	
Manganese, Dissolved	0.111	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7439-96-5	
Manganese	0.116	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/19/13 15:10	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/19/13 15:24	CCM	7439-97-6	
Nickel, Dissolved	0.006	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7440-02-0	
Nickel	0.008	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:47	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:45	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 13:47	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 13:45	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:47	PER	7440-66-6	
Zinc	0.010	mg/L	0.005	SW6020A	12/30/13 13:45	PER	7440-66-6	

Lab Sample ID: S59456.03 (continued)
Sample Tag: Duplicate 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/20/13 18:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	88-75-5	

Lab Sample ID: S59456.03 (continued)
Sample Tag: Duplicate 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/20/13 18:43	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/17/13 15:07	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 19:47	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 19:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 19:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 19:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 19:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	108-87-2	

Lab Sample ID: S59456.03 (continued)
Sample Tag: Duplicate 1

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 19:47	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 19:47	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

78504

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO: 810 225 1949 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☑ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 6
SAMPLER(S): PLEASE PRINT/SIGN NAME: Jeff Wau

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TAL METAL	Miss. TAL Metal	TCL VOC DI 1-4 SVM	SVOCS
594456.01	12/6	7:00	Trip Blank	GW	1		1								X	
.02	12/6	15:50	MW-13-50	GW	7	2	3	2					X	X	X	X
.03	12.6		Duplicate 1	GW	7	2	3	2					X	X	X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
		12.16.13	17:30
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
MF Stevens		12.16.13	17:30
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
MF Stevens			
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
MRS		12-17-13	930

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
	12-17-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Kevin George	12/17/13	930

SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59301.01(01)
Generated on 12/30/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman, Jennifer Hamel

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59301.01-S59301.06
Project: B0064479.2013.00102
Collected Date: 12/05/2013 - 12/06/2013
Submitted Date/Time: 12/06/2013 15:10
Sampled by: Lance Rogers
P.O. #: B0064479.2013.00102

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59301.01	BWL-10-10 (130')(120513)	Groundwater	12/05/2013 10:50
S59301.02	BWL-10-10 (165')(120513)	Groundwater	12/05/2013 12:00
S59301.03	TWP-90-4 (120513)	Groundwater	12/05/2013 15:00
S59301.04	BWL-10-10 (195')(120613)	Groundwater	12/06/2013 12:10
S59301.05	BWL-10-10 (220')(120613)	Groundwater	12/06/2013 13:00
S59301.06	BWL-10-10 (260')(120613)	Groundwater	12/06/2013 13:40

Analytical Laboratory Report

Lab Sample ID: S59301.01
Sample Tag: BWL-10-10 (130')(120513)
Collected Date/Time: 12/05/2013 10:50
Matrix: Groundwater
COC Reference: 78210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
2	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471B	12/11/13 11:40	CCM		
Mercury Digestion	Completed			SW7471B	12/11/13 11:40	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/11/13 09:25	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/30/13 12:55	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/30/13 12:46	PER	7440-38-2	
Barium, Dissolved	0.091	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7440-39-3	
Barium	0.117	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7440-39-3	
Boron, Dissolved	0.34	mg/L	0.04	SW6020A	12/30/13 12:55	PER	7440-42-8	
Boron	0.29	mg/L	0.04	SW6020A	12/30/13 12:46	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 12:55	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 12:46	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 12:55	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 12:46	PER	7439-92-1	
Manganese, Dissolved	0.332	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7439-96-5	
Manganese	0.330	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/11/13 15:45	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/11/13 15:43	CCM	7439-97-6	
Nickel, Dissolved	0.007	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7440-02-0	
Nickel	0.007	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 12:55	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 12:46	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 12:55	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 12:46	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 12:55	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020A	12/30/13 12:46	PER	7440-66-6	

Lab Sample ID: S59301.01 (continued)
Sample Tag: BWL-10-10 (130')(120513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/16/13 14:47	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/10/13 19:16	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/10/13 19:16	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/10/13 19:16	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/10/13 19:16	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/10/13 19:16	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/10/13 19:16	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	120-82-1	

Lab Sample ID: S59301.01 (continued)
Sample Tag: BWL-10-10 (130')(120513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/10/13 19:16	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59301.02
Sample Tag: BWL-10-10 (165')(120513)
Collected Date/Time: 12/05/2013 12:00
Matrix: Groundwater
COC Reference: 78210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
1	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471B	12/11/13 11:40	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/11/13 09:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/30/13 12:57	PER	7440-38-2	
Barium	0.094	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7440-39-3	
Boron	0.36	mg/L	0.04	SW6020A	12/30/13 12:57	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 12:57	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 12:57	PER	7439-92-1	
Manganese	0.329	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/11/13 15:55	CCM	7439-97-6	
Nickel	0.007	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 12:57	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 12:57	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/30/13 12:57	PER	7440-66-6	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/16/13 15:05	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/10/13 19:38	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/10/13 19:38	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/10/13 19:38	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-34-3	

Lab Sample ID: S59301.02 (continued)
Sample Tag: BWL-10-10 (165')(120513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/10/13 19:38	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/10/13 19:38	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/10/13 19:38	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/10/13 19:38	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59301.03
Sample Tag: TWP-90-4 (120513)
Collected Date/Time: 12/05/2013 15:00
Matrix: Groundwater
COC Reference: 78210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
1	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471B	12/11/13 11:40	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/11/13 09:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7440-36-0	
Arsenic	0.007	mg/L	0.002	SW6020A	12/30/13 12:59	PER	7440-38-2	
Barium	0.196	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7440-39-3	
Boron	0.07	mg/L	0.04	SW6020A	12/30/13 12:59	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 12:59	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7440-48-4	
Copper	0.007	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 12:59	PER	7439-92-1	
Manganese	0.017	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/11/13 15:57	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 12:59	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 12:59	PER	7440-62-2	
Zinc	0.012	mg/L	0.005	SW6020A	12/30/13 12:59	PER	7440-66-6	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/16/13 15:24	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/10/13 19:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/10/13 19:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/10/13 19:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-34-3	

Lab Sample ID: S59301.03 (continued)
Sample Tag: TWP-90-4 (120513)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/10/13 19:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/10/13 19:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/10/13 19:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/10/13 19:59	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59301.04
Sample Tag: BWL-10-10 (195')(120613)
Collected Date/Time: 12/06/2013 12:10
Matrix: Groundwater
COC Reference: 78210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
1	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471B	12/11/13 11:40	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/11/13 09:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/30/13 13:01	PER	7440-38-2	
Barium	0.103	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7440-39-3	
Boron	0.26	mg/L	0.04	SW6020A	12/30/13 13:01	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:01	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7440-48-4	
Copper	0.006	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 13:01	PER	7439-92-1	
Manganese	0.299	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/11/13 15:59	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:01	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 13:01	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	12/30/13 13:01	PER	7440-66-6	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/16/13 15:42	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/10/13 20:21	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/10/13 20:21	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/10/13 20:21	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-34-3	

Lab Sample ID: S59301.04 (continued)
Sample Tag: BWL-10-10 (195')(120613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/10/13 20:21	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/10/13 20:21	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/10/13 20:21	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/10/13 20:21	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59301.05
Sample Tag: BWL-10-10 (220')(120613)
Collected Date/Time: 12/06/2013 13:00
Matrix: Groundwater
COC Reference: 78210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
1	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471B	12/11/13 11:40	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/11/13 09:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/30/13 13:03	PER	7440-38-2	
Barium	0.094	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7440-39-3	
Boron	0.34	mg/L	0.04	SW6020A	12/30/13 13:03	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:03	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 13:03	PER	7439-92-1	
Manganese	0.195	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/11/13 16:01	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:03	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 13:03	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/30/13 13:03	PER	7440-66-6	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/16/13 16:00	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/10/13 20:43	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/10/13 20:43	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/10/13 20:43	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	74-87-3	
Vinyl chloride	2	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-34-3	

Lab Sample ID: S59301.05 (continued)
Sample Tag: BWL-10-10 (220')(120613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/10/13 20:43	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/10/13 20:43	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/10/13 20:43	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/10/13 20:43	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59301.06
Sample Tag: BWL-10-10 (260')(120613)
Collected Date/Time: 12/06/2013 13:40
Matrix: Groundwater
COC Reference: 78210

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
1	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471B	12/11/13 11:40	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/11/13 09:25	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/30/13 13:05	PER	7440-38-2	
Barium	0.094	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7440-39-3	
Boron	0.44	mg/L	0.04	SW6020A	12/30/13 13:05	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:05	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 13:05	PER	7439-92-1	
Manganese	0.170	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/11/13 16:03	CCM	7439-97-6	
Nickel	0.008	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:05	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 13:05	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	12/30/13 13:05	PER	7440-66-6	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/16/13 16:18	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/10/13 21:05	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/10/13 21:05	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/10/13 21:05	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	74-87-3	
Vinyl chloride	2	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-34-3	

Lab Sample ID: S59301.06 (continued)
Sample Tag: BWL-10-10 (260')(120613)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/10/13 21:05	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/10/13 21:05	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/10/13 21:05	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/10/13 21:05	WAT	96-12-8	

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C.O.C. PAGE # 1 OF 1

78210

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christenson
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr. suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.225.1900 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christenson@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064479.2013.00102
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Lance Rogers / Lance M Rogers

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS X STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC + 1,4D Dioxane	TAL Total metals	TAL Dissolved metals	Special Instructions
59301.01	12-5-13	1050	BWL-10-10 (130') (120513)	GW	5		3	2					X	X	X	- Dissolved samples
.02	12-5-13	1200	BWL-10-10 (165') (120513)	GW	4		3	1					X	X		have been field
.03	12-5-13	1500	TWP-90-4 (120513)	GW	4		3	1					X	X		filtered
.04	12-6-13	1210	BWL-10-10 (195') (120613)	GW	4		3	1					X	X		
.05	12-6-13	1300	BWL-10-10 (220') (120613)	GW	4		3	1					X	X		
.06	12-6-13	1340	BWL-10-10 (260') (120613)	GW	4		3	1					X	X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Lance M Rogers / ARCADIS ☐ Sampler	DATE 12-6-13	TIME 1510
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 12/6/13	TIME 1510

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 6.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57729.01(01)
Generated on 09/06/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

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Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57729.01-S57729.03
Project: PLANT 2 B0064479
Collected Date: 08/20/2013
Submitted Date/Time: 08/21/2013 09:45
Sampled by: Cliff Walls
P.O. #: B0064479

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57729.01	MW-12-01	Groundwater	08/20/2013 15:10
S57729.02	DUP-5	Groundwater	08/20/2013 00:01
S57729.03	TRIP BLANK	Groundwater	08/20/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S57729.01
Sample Tag: MW-12-01
Collected Date/Time: 08/20/2013 15:10
Matrix: Groundwater
COC Reference: 75446

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
3	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	322	mg/L	1	2320B	08/23/13 10:16	JDP		
Carbon Dioxide	197	mg/L	10	4500-CO2C	08/21/13 10:38	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 11:16	JDP	14797-55-8	
Sulfate	182	mg/L	5	E300.0	08/22/13 11:16	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-36-0	
Arsenic, Dissolved	0.010	mg/L	0.002	SW6020	09/04/13 17:22	PER	7440-38-2	
Arsenic	0.010	mg/L	0.002	SW6020	09/04/13 17:20	PER	7440-38-2	
Barium, Dissolved	0.059	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-39-3	
Barium	0.075	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-39-3	
Boron, Dissolved	0.12	mg/L	0.04	SW6020	09/04/13 17:22	PER	7440-42-8	
Boron	0.12	mg/L	0.04	SW6020	09/04/13 17:20	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-47-3	
Chromium	0.019	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-50-8	
Copper	0.011	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-50-8	
Iron, Dissolved	10.2	mg/L	0.02	E200.8	09/04/13 17:22	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/04/13 17:22	PER	7439-92-1	
Lead	0.004	mg/L	0.003	SW6020	09/04/13 17:20	PER	7439-92-1	
Manganese, Dissolved	0.094	mg/L	0.005	E200.8	09/04/13 17:22	PER	7439-96-5	
Manganese	0.118	mg/L	0.005	SW6020	09/04/13 17:20	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:39	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:37	CCM	7439-97-6	
Nickel, Dissolved	0.012	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-02-0	
Nickel	0.019	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:22	PER	7782-49-2	

Lab Sample ID: S57729.01 (continued)
Sample Tag: MW-12-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 17:20	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/04/13 17:22	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 17:20	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-62-2	
Vanadium	0.007	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:22	PER	7440-66-6	
Zinc	0.052	mg/L	0.005	SW6020	09/04/13 17:20	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 21:24	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/28/13 21:24	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	08/28/13 21:24	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	87-68-3	

Lab Sample ID: S57729.01 (continued)
Sample Tag: MW-12-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 21:24	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 17:09	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 18:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 18:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 18:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	110-82-7	

Lab Sample ID: S57729.01 (continued)
Sample Tag: MW-12-01

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 18:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 18:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 18:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 18:51	WAT	96-12-8	
Organics								
Methane in Water	12	ug/L	0.5	RSK-175	08/29/13 10:56	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57729.02
Sample Tag: DUP-5
Collected Date/Time: 08/20/2013 00:01
Matrix: Groundwater
COC Reference: 75446

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.6	IR
2	1L Amber	None	Yes	4.6	IR
3	125ml Plastic	HNO3	Yes	4.6	IR
1	500ml Plastic	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
Metal Digestion	Completed			3015A	09/04/13 11:30	PER		
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Inorganics								
Alkalinity as CaCO3	325	mg/L	1	2320B	08/23/13 10:18	JDP		
Carbon Dioxide	182	mg/L	10	4500-CO2C	08/21/13 10:40	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/22/13 11:29	JDP	14797-55-8	
Sulfate	183	mg/L	5	E300.0	08/22/13 11:29	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-36-0	
Arsenic, Dissolved	0.010	mg/L	0.002	SW6020	09/04/13 17:26	PER	7440-38-2	
Arsenic	0.010	mg/L	0.002	SW6020	09/04/13 17:24	PER	7440-38-2	
Barium, Dissolved	0.059	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-39-3	
Barium	0.071	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-39-3	
Boron, Dissolved	0.12	mg/L	0.04	SW6020	09/04/13 17:26	PER	7440-42-8	
Boron	0.13	mg/L	0.04	SW6020	09/04/13 17:24	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-47-3	
Chromium	0.018	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-50-8	
Copper	0.012	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-50-8	
Iron, Dissolved	10.5	mg/L	0.02	E200.8	09/04/13 17:26	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/04/13 17:26	PER	7439-92-1	
Lead	0.003	mg/L	0.003	SW6020	09/04/13 17:24	PER	7439-92-1	
Manganese, Dissolved	0.095	mg/L	0.005	E200.8	09/04/13 17:26	PER	7439-96-5	
Manganese	0.114	mg/L	0.005	SW6020	09/04/13 17:24	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:43	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:41	CCM	7439-97-6	
Nickel, Dissolved	0.014	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-02-0	
Nickel	0.019	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-02-0	
Selenium, Dissolved	0.005	mg/L	0.005	SW6020	09/04/13 17:26	PER	7782-49-2	

Lab Sample ID: S57729.02 (continued)
Sample Tag: DUP-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	0.005	mg/L	0.005	SW6020	09/04/13 17:24	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/04/13 17:26	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 17:24	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-62-2	
Vanadium	0.015	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 17:26	PER	7440-66-6	
Zinc	0.048	mg/L	0.005	SW6020	09/04/13 17:24	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 21:59	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	84-66-2	
Dimethyl phthalate	4	ug/L	1	SW8270C	08/28/13 21:59	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/28/13 21:59	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	87-68-3	

Lab Sample ID: S57729.02 (continued)
Sample Tag: DUP-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 21:59	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 17:27	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 19:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 19:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 19:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	110-82-7	

Lab Sample ID: S57729.02 (continued)
Sample Tag: DUP-5

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 19:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 19:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 19:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:11	WAT	96-12-8	
Organics								
Methane in Water	13	ug/L	0.5	RSK-175	08/29/13 11:04	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57729.03
Sample Tag: TRIP BLANK
Collected Date/Time: 08/20/2013 00:01
Matrix: Groundwater
COC Reference: 75446

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/22/13 13:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/22/13 17:45	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 19:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 19:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 19:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 19:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 19:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	79-34-5	

Lab Sample ID: S57729.03 (continued)
Sample Tag: TRIP BLANK

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 19:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 19:31	WAT	96-12-8	

September 04, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308430	08/22/2013	S57729

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308430**
Project:	Subcontract Lab Services	Description:	S57729
Client Sample ID:	**57729.01**	Sampled:	08/20/13 15:10
Lab Sample ID:	**1308430-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**12**	0.50	ug/L	1	RSK-175	08/29/13 10:56	JMF	1309108

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308430**
Project:	Subcontract Lab Services	Description:	S57729
Client Sample ID:	**57729.02**	Sampled:	08/20/13 00:00
Lab Sample ID:	**1308430-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/22/13 12:45

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**13**	0.50	ug/L	1	RSK-175	08/29/13 11:04	JMF	1309108

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309108 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/29/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29056	
Methane		33.0	**37.0**	112	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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27-11

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # _____ OF _____ #1308430

75465

CHAIN OF CUSTODY RECORD

Rack # 116 White

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY: Merit Labs
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557729
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
-01	8/20	1510	57729.01	GW	3		X						X	
-02	8/20	—	57729.02	↓	↓		↓						X	* Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/21/13 TIME: 1645
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5973 1033 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8/23/13 TIME: 1245

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

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TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit | Work Order #: 1308430
Receipt Record Page/Line #: | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): LR 8/22/13

☑ Cooler ☐ Box ☐ Other _____ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)

☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Client (RWB)	1355	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1 4.9	–	4.9
2 4.9	–	4.9
3 5.1	–	5.1
Average °C		5.0
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐		Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐		Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8/22/13 1245	8/22/13 1414	Yes / No

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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C.O.C. PAGE # _____ OF _____

75446

CHAIN OF CUSTODY RECORD

REPORT TO		INVOICE TO	
CONTACT NAME	Lance Rogers	CONTACT NAME	☐ SAME
COMPANY	Arcadis	COMPANY	
ADDRESS	10559 Citation Dr Suite 100	ADDRESS	
CITY / STATE / ZIP CODE	Brighton / MI	CITY / STATE / ZIP CODE	
PHONE NO. / FAX NO. / P.O. NO.		PHONE NO. / E-MAIL ADDRESS	
E-MAIL ADDRESS	Lance.Rogers@arcadis.us.com	QUOTE NO.	

PROJECT NO./NAME: Plant 2 B006447.9

SAMPLER(S) - PLEASE PRINT/SIGN NAME: C. Walls

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC SIM 1-4	TCL SVOC	TAL Metals	Diss TAL Metals	Diss Fe + Mn	Methane	Alk, Cond, Sul, Nit			
57729.01	8-20-13	15:10	MW-1201	GW	12	3	6	3					x	x	x	x	x	x	x			
.02	8-20-13		Dup-5	GW	12	3	6	3					x	x	x	x	x	x	x			
.03	8-20-13		Trip Blank	GW	1		1						x									

RELINQUISHED BY: SIGNATURE/ORGANIZATION	C. Walls ☐ Sampler	DATE 8-20-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	FMC Storage	DATE 8-20-13	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	MQ	DATE 8-21-13	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 8-21-13	TIME 9:30
RECEIVED BY: SIGNATURE/ORGANIZATION	Barbara Ball	DATE 8/21/13	TIME 9:30
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

NOTES: TEMP. ON ARRIVAL 4.7

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57703.01(01)
Generated on 09/06/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57703.01-S57703.03
Project: Plant 2 B0064479
Collected Date: 08/20/2013
Submitted Date/Time: 08/20/2013 13:35
Sampled by: Cliff Walls
P.O. #: B0064479

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57703.01	P2-MW-03	Groundwater	08/20/2013 09:30
S57703.02	MW-12-17	Groundwater	08/20/2013 12:30
S57703.03	Trip Blank	Groundwater	08/20/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57703.01
Sample Tag: P2-MW-03
Collected Date/Time: 08/20/2013 09:30
Matrix: Groundwater
COC Reference: 75445

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
2	125ml Plastic	HNO3	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-36-0	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020	09/04/13 15:47	PER	7440-38-2	
Arsenic	0.010	mg/L	0.002	SW6020	09/04/13 15:45	PER	7440-38-2	
Barium, Dissolved	0.383	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-39-3	
Barium	0.457	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-39-3	
Boron, Dissolved	0.08	mg/L	0.04	SW6020	09/04/13 15:47	PER	7440-42-8	
Boron	0.09	mg/L	0.04	SW6020	09/04/13 15:45	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-47-3	
Chromium	0.024	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-48-4	
Cobalt	0.006	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-50-8	
Copper	0.022	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/04/13 15:47	PER	7439-92-1	
Lead	0.007	mg/L	0.003	SW6020	09/04/13 15:45	PER	7439-92-1	
Manganese, Dissolved	0.118	mg/L	0.005	SW6020	09/04/13 15:47	PER	7439-96-5	
Manganese	0.369	mg/L	0.005	SW6020	09/04/13 15:45	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:02	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:00	CCM	7439-97-6	
Nickel, Dissolved	0.010	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-02-0	
Nickel	0.028	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:47	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 15:45	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/04/13 15:47	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 15:45	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-62-2	
Vanadium	0.017	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-62-2	
Zinc, Dissolved	0.007	mg/L	0.005	SW6020	09/04/13 15:47	PER	7440-66-6	
Zinc	0.040	mg/L	0.005	SW6020	09/04/13 15:45	PER	7440-66-6	

Lab Sample ID: S57703.01 (continued)
Sample Tag: P2-MW-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 15:41	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	132-64-9	
Diethyl phthalate	1	ug/L	1	SW8270C	08/28/13 15:41	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/28/13 15:41	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	88-75-5	

Lab Sample ID: S57703.01 (continued)
Sample Tag: P2-MW-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 15:41	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	30	ug/L	5	SW8260B - SIM	08/21/13 19:16	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 19:40	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 19:40	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 19:40	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 19:40	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 19:40	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	108-87-2	

Lab Sample ID: S57703.01 (continued)
Sample Tag: P2-MW-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 19:40	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 19:40	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57703.02
Sample Tag: MW-12-17
Collected Date/Time: 08/20/2013 12:30
Matrix: Groundwater
COC Reference: 75445

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.5	IR
2	1L Amber	None	Yes	4.5	IR
3	125ml Plastic	HNO3	Yes	4.5	IR
1	500ml Plastic	None	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	362	mg/L	1	2320B	08/20/13 15:40	JDP		
Carbon Dioxide	160	mg/L	10	4500-CO2C	08/21/13 09:14	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/21/13 11:24	JDP	14797-55-8	
Sulfate	84	mg/L	5	E300.0	08/21/13 11:24	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-36-0	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020	09/04/13 15:50	PER	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020	09/04/13 15:48	PER	7440-38-2	
Barium, Dissolved	0.226	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-39-3	
Barium	0.232	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	09/04/13 15:50	PER	7440-42-8	
Boron	0.04	mg/L	0.04	SW6020	09/04/13 15:48	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-47-3	
Chromium	0.005	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-50-8	
Copper	0.027	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-50-8	
Iron, Dissolved	2.21	mg/L	0.02	E200.8	09/04/13 15:50	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/04/13 15:50	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 15:48	PER	7439-92-1	
Manganese, Dissolved	0.090	mg/L	0.005	E200.8	09/04/13 15:50	PER	7439-96-5	
Manganese	0.095	mg/L	0.005	SW6020	09/04/13 15:48	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:06	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 16:04	CCM	7439-97-6	
Nickel, Dissolved	0.015	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-02-0	
Nickel	0.015	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:50	PER	7782-49-2	

Lab Sample ID: S57703.02 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 15:48	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/04/13 15:50	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 15:48	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-62-2	
Zinc, Dissolved	0.009	mg/L	0.005	SW6020	09/04/13 15:50	PER	7440-66-6	
Zinc	0.005	mg/L	0.005	SW6020	09/04/13 15:48	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 16:15	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/28/13 16:15	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	87-68-3	

Lab Sample ID: S57703.02 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 16:15	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 19:34	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 20:01	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 20:01	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 20:01	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	156-60-5	
1,1-Dichloroethane	2	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	110-82-7	

Lab Sample ID: S57703.02 (continued)
Sample Tag: MW-12-17

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 20:01	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 20:01	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 20:01	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 20:01	WAT	96-12-8	
Organics								
Methane in Water	110	ug/L	2.0	RSK-175	08/28/13 14:15	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57703.03
Sample Tag: Trip Blank
Collected Date/Time: 08/20/2013 07:00
Matrix: Groundwater
COC Reference: 75445

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.5	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 19:52	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/21/13 20:22	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/21/13 20:22	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/21/13 20:22	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/21/13 20:22	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/21/13 20:22	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	79-34-5	

Lab Sample ID: S57703.03 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/21/13 20:22	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/21/13 20:22	WAT	96-12-8	

September 03, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308369	08/21/2013	S57703

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308369**
Project:	Subcontract Lab Services	Description:	S57703
Client Sample ID:	**57703.02**	Sampled:	08/20/13 09:30
Lab Sample ID:	**1308369-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**110**	2.0	ug/L	4	RSK-175	08/28/13 14:15	JMF	1309067

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309067 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/28/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29005	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/28/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29005	
Methane		33.0	**33.2**	100	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26-33

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75459

CHAIN OF CUSTODY RECORD E 130839

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 57703
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methanol	Special Instructions
	8/20	930	57703,02	SW	3		X						X	* Sub'd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/20/13 TIME: 1400
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5825 2008 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8.21.13 TIME: 1150

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERITS SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

This report shall not be reproduced, except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES
5560 Corporate Exchange Court SE ◆ Grand Rapids, MI 49512 ◆ 616.975.4500 ◆ Fax 616.942.7463 ◆ www.trimatrixlabs.com

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308369
Receipt Record Page/Line #: 26- | New / Add To: ~ | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time
Im 3222	1330						

Custody Seals:
- Cooler 1: ☑ None ☐ Present / Intact ☐ Present / Not Intact
- Coolers 2–4: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location:
- Cooler 1: (Dispersed) / Top / Middle / Bottom
- Coolers 2–4: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- Cooler 1: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
- Coolers 2–4: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- Cooler 1: ☐ Temperature Blank (TB) ☐ 1 Container
- Coolers 2–4: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1 4.1	-	4.1
2 4.5	-	4.5
3 4.2	-	4.2
Average °C		4.3

- Cooler 1: ☐ Cooler ID on COC? ☐ VOC Trip Blank received?
- Coolers 2–4: ☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☑	Chain of Custody record(s)? If No, Initiated By _____
☐	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
☐	☐	☐	Average sample temperature ≤6° C?
☐	☑	☐	Was thermal preservation required?
☐	☐		If "No", Project Chemist Approval Intials: _____
☐	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐		Completed Sample Preservation Verification Form?
☐	☐	☐	Samples chemically preserved correctly?
☐	☐		If "No", added orange tag?
☐	☐	☐	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☑	Sample ID matches COC?
☐	☑	Sample Date and Time matches COC?
☐	☐	Container type completed on COC?
☐	☑	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

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C.O.C. PAGE # 1 OF 1

75445

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lake Reeves
COMPANY: Arcadis
ADDRESS: 10589 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Lake.Reeves@arcadis.us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 2 Boiler 9479
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wans

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC SIM 1,4	TCL SVOC	TAL METALS	DISS TAL METALS	DISS FE 1 FLT	ALK, CO_2, SULFATE	METHANE
57703.01	8/20/13	9:30	P2-MW-03	GW	7	2	3	2					X	X	X	X	X	X	X
.02	8/20/13	12:30	MW-12-17	GW	12	3	6	3					+	+	+	+	+	+	+
.03	8/20/13	7:00	TRIP BLANK	GW	2		2						X						

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Cliff Wans ☐ Sampler DATE: 8/20/13 TIME: 1255
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] DATE: 8/20/13 TIME: 1255

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Talent Fast DATE: 8/20/13 TIME: 1335

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57702.01(01)
Generated on 09/06/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57702.01-S57702.05
Project: Plant 6/B0064481.2013.00603
Collected Date: 08/20/2013
Submitted Date/Time: 08/20/2013 13:35
Sampled by: Steve Stelter
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57702.01	MW-12-16 (82013)	Groundwater	08/20/2013 09:45
S57702.02	MW-12-16 (82013) MS	Groundwater	08/20/2013 09:45
S57702.03	MW-12-16 (82013) MSD	Groundwater	08/20/2013 09:45
S57702.04	MW-12-15 (82013)	Groundwater	08/20/2013 11:50
S57702.05	Trip Blank	Liquid	08/20/2013 07:00

Analytical Laboratory Report

Lab Sample ID: S57702.01
Sample Tag: MW-12-16 (82013)
Collected Date/Time: 08/20/2013 09:45
Matrix: Groundwater
COC Reference: 75284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Alkalinity as CaCO3	535	mg/L	1	2320B	08/20/13 15:36	JDP		
Carbon Dioxide	287	mg/L	10	4500-CO2C	08/21/13 09:10	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/21/13 10:59	JDP	14797-55-8	
Sulfate	189	mg/L	10	E300.0	08/21/13 12:28	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-36-0	
Arsenic	0.015	mg/L	0.002	SW6020	09/04/13 15:10	PER	7440-38-2	
Barium	0.203	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020	09/04/13 15:10	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-50-8	
Iron, Dissolved	6.10	mg/L	0.02	E200.8	09/04/13 16:04	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 15:10	PER	7439-92-1	
Manganese, Dissolved	0.310	mg/L	0.005	E200.8	09/04/13 16:04	PER	7439-96-5	
Manganese	0.318	mg/L	0.005	SW6020	09/04/13 15:10	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:37	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 15:10	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 15:10	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-62-2	
Zinc	0.005	mg/L	0.005	SW6020	09/04/13 15:10	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	92-52-4	

Lab Sample ID: S57702.01 (continued)
Sample Tag: MW-12-16 (82013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 15:41	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	84-66-2	
Dimethyl phthalate	7	ug/L	1	SW8270C	08/27/13 15:41	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	91-20-3	

Lab Sample ID: S57702.01 (continued)
Sample Tag: MW-12-16 (82013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 15:41	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 15:30	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 15:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 15:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 15:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 15:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 15:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	124-48-1	

Lab Sample ID: S57702.01 (continued)
Sample Tag: MW-12-16 (82013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 15:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 15:50	WAT	96-12-8	
Organics								
Methane in Water	150	ug/L	2.0	RSK-175	08/28/13 14:00	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57702.02
Sample Tag: MW-12-16 (82013) MS
Collected Date/Time: 08/20/2013 09:45
Matrix: Groundwater
COC Reference: 75284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Metals								
Antimony	0.262	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-36-0	
Arsenic	0.284	mg/L	0.002	SW6020	09/04/13 15:14	PER	7440-38-2	
Barium	0.455	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-39-3	
Boron	0.31	mg/L	0.04	SW6020	09/04/13 15:14	PER	7440-42-8	
Cadmium	0.260	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-43-9	
Chromium	0.247	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-47-3	
Cobalt	0.251	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-48-4	
Copper	0.223	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-50-8	
Iron, Dissolved	6.36	mg/L	0.02	E200.8	09/04/13 16:10	PER	7439-89-6	
Lead	0.238	mg/L	0.003	SW6020	09/04/13 15:14	PER	7439-92-1	
Manganese, Dissolved	0.554	mg/L	0.005	E200.8	09/04/13 16:10	PER	7439-96-5	
Manganese	0.554	mg/L	0.005	SW6020	09/04/13 15:14	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	08/22/13 15:39	CCM	7439-97-6	
Nickel	0.256	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-02-0	
Selenium	0.238	mg/L	0.005	SW6020	09/04/13 15:14	PER	7782-49-2	
Silver	0.240	mg/L	0.0005	SW6020	09/04/13 15:14	PER	7440-22-4	
Vanadium	0.253	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-62-2	
Zinc	0.242	mg/L	0.005	SW6020	09/04/13 15:14	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	43	ug/L	1	SW8270C	08/27/13 16:16	PL	83-32-9	1
Acenaphthylene	50	ug/L	1	SW8270C	08/27/13 16:16	PL	208-96-8	1
Acetophenone	37	ug/L	1	SW8270C	08/27/13 16:16	PL	98-86-2	1
Anthracene	45	ug/L	1	SW8270C	08/27/13 16:16	PL	120-12-7	1
Atrazine	40	ug/L	1	SW8270C	08/27/13 16:16	PL	1912-24-9	1
1,1'-Biphenyl	42	ug/L	1	SW8270C	08/27/13 16:16	PL	92-52-4	1
4-Bromophenyl phenyl ether	42	ug/L	1	SW8270C	08/27/13 16:16	PL	101-55-3	1
di-n-Butyl phthalate	48	ug/L	1	SW8270C	08/27/13 16:16	PL	84-74-2	1
Benzaldehyde	40	ug/L	1	SW8270C	08/27/13 16:16	PL	100-52-7	1
Benzo(a)anthracene	49	ug/L	1	SW8270C	08/27/13 16:16	PL	56-55-3	1
Benzo(a)pyrene	48	ug/L	1	SW8270C	08/27/13 16:16	PL	50-32-8	1
Benzo(b)fluoranthene	42	ug/L	1	SW8270C	08/27/13 16:16	PL	205-99-2	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57702.02 (continued)
Sample Tag: MW-12-16 (82013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	54	ug/L	1	SW8270C	08/27/13 16:16	PL	191-24-2	1
Benzo(k)fluoranthene	42	ug/L	1	SW8270C	08/27/13 16:16	PL	207-08-9	1
Butyl benzyl phthalate	47	ug/L	1	SW8270C	08/27/13 16:16	PL	85-68-7	1
2-Chloronaphthalene	41	ug/L	1	SW8270C	08/27/13 16:16	PL	91-58-7	1
2-Chlorophenol	38	ug/L	1	SW8270C	08/27/13 16:16	PL	95-57-8	1
4-Chloro-3-methylphenol	47	ug/L	1	SW8270C	08/27/13 16:16	PL	59-50-7	1
4-Chloroaniline	27	ug/L	1	SW8270C	08/27/13 16:16	PL	106-47-8	1
4-Chlorophenyl phenyl ether	45	ug/L	1	SW8270C	08/27/13 16:16	PL	7005-72-3	1
Caprolactam	6	ug/L	1	SW8270C	08/27/13 16:16	PL	105-60-2	1
Carbazole	44	ug/L	1	SW8270C	08/27/13 16:16	PL	86-74-8	1
bis(2-Chloroethoxy)methane	40	ug/L	1	SW8270C	08/27/13 16:16	PL	111-91-1	1
bis(2-Chloroethyl)ether	37	ug/L	1	SW8270C	08/27/13 16:16	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	39	ug/L	1	SW8270C	08/27/13 16:16	PL	108-60-1	1
Chrysene	46	ug/L	1	SW8270C	08/27/13 16:16	PL	218-01-9	1
2,4-Dichlorophenol	44	ug/L	1	SW8270C	08/27/13 16:16	PL	120-83-2	1
2,4-Dimethylphenol	43	ug/L	1	SW8270C	08/27/13 16:16	PL	105-67-9	1
2,4-Dinitrophenol	46	ug/L	1	SW8270C	08/27/13 16:16	PL	51-28-5	1
2,4-Dinitrotoluene	41	ug/L	1	SW8270C	08/27/13 16:16	PL	121-14-2	1
2,6-Dinitrotoluene	45	ug/L	1	SW8270C	08/27/13 16:16	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	43	ug/L	1	SW8270C	08/27/13 16:16	PL	534-52-1	1
Dibenzo(ah)anthracene	63	ug/L	2	SW8270C	08/27/13 16:16	PL	53-70-3	1
Dibenzofuran	45	ug/L	1	SW8270C	08/27/13 16:16	PL	132-64-9	1
Diethyl phthalate	46	ug/L	1	SW8270C	08/27/13 16:16	PL	84-66-2	1
Dimethyl phthalate	53	ug/L	1	SW8270C	08/27/13 16:16	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	49	ug/L	1	SW8270C	08/27/13 16:16	PL	117-81-7	1
Fluoranthene	45	ug/L	1	SW8270C	08/27/13 16:16	PL	206-44-0	1
Fluorene	45	ug/L	1	SW8270C	08/27/13 16:16	PL	86-73-7	1
Hexachlorobutadiene	32	ug/L	1	SW8270C	08/27/13 16:16	PL	87-68-3	1
Hexachlorocyclopentadiene	55	ug/L	1	SW8270C	08/27/13 16:16	PL	77-47-4	1
Hexachloroethane	28	ug/L	1	SW8270C	08/27/13 16:16	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	61	ug/L	1	SW8270C	08/27/13 16:16	PL	193-39-5	1
Isophorone	56	ug/L	1	SW8270C	08/27/13 16:16	PL	78-59-1	1
2-Methylnaphthalene	41	ug/L	1	SW8270C	08/27/13 16:16	PL	91-57-6	1
2-Methylphenol	44	ug/L	1	SW8270C	08/27/13 16:16	PL	95-48-7	1
3-, 4-Methylphenol	44	ug/L	1	SW8270C	08/27/13 16:16	PL	3/4-Cresol	1
2-Nitroaniline	45	ug/L	1	SW8270C	08/27/13 16:16	PL	88-74-4	1
2-Nitrophenol	40	ug/L	1	SW8270C	08/27/13 16:16	PL	88-75-5	1
3-Nitroaniline	34	ug/L	1	SW8270C	08/27/13 16:16	PL	99-09-2	1
4-Nitroaniline	38	ug/L	1	SW8270C	08/27/13 16:16	PL	100-01-6	1
4-Nitrophenol	34	ug/L	1	SW8270C	08/27/13 16:16	PL	100-02-7	1
N-Nitrosodi-n-propylamine	39	ug/L	1	SW8270C	08/27/13 16:16	PL	621-64-7	1
N-Nitrosodiphenylamine	41	ug/L	1	SW8270C	08/27/13 16:16	PL	86-30-6	1
Naphthalene	37	ug/L	1	SW8270C	08/27/13 16:16	PL	91-20-3	1
Nitrobenzene	40	ug/L	1	SW8270C	08/27/13 16:16	PL	98-95-3	1
di-n-Octyl phthalate	56	ug/L	1	SW8270C	08/27/13 16:16	PL	117-84-0	1
Pentachlorophenol	36	ug/L	1	SW8270C	08/27/13 16:16	PL	87-86-5	1
Phenanthrene	44	ug/L	1	SW8270C	08/27/13 16:16	PL	85-01-8	1
Phenol	26	ug/L	1	SW8270C	08/27/13 16:16	PL	108-95-2	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57702.02 (continued)
Sample Tag: MW-12-16 (82013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Pyrene	49	ug/L	1	SW8270C	08/27/13 16:16	PL	129-00-0	1
2,4,5-Trichlorophenol	56	ug/L	1	SW8270C	08/27/13 16:16	PL	95-95-4	1
2,4,6-Trichlorophenol	46	ug/L	1	SW8270C	08/27/13 16:16	PL	88-06-2	1
Hexachlorobenzene	42	ug/L	1	SW8270C	08/27/13 16:16	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	49	ug/L	5	SW8260B - SIM	08/26/13 22:10	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	51	ug/L	1	SW8260B	08/27/13 13:46	WAT	76-13-1	2
Acetone	40	ug/L	10	SW8260B	08/27/13 13:46	WAT	67-64-1	2
Carbon disulfide	54	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-15-0	2
Methyl Acetate	50	ug/L	10	SW8260B	08/27/13 13:46	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	55	ug/L	1	SW8260B	08/27/13 13:46	WAT	1634-04-4	2
2-Butanone (MEK)	46	ug/L	10	SW8260B	08/27/13 13:46	WAT	78-93-3	2
Dichlorodifluoromethane	41	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-71-8	2
Chloromethane	44	ug/L	1	SW8260B	08/27/13 13:46	WAT	74-87-3	2
Vinyl chloride	44	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-01-4	2
Bromomethane	60	ug/L	1	SW8260B	08/27/13 13:46	WAT	74-83-9	2
Chloroethane	60	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-00-3	2
Trichlorofluoromethane	56	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-69-4	2
1,1-Dichloroethene	49	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-35-4	2
Methylene chloride	49	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	08/27/13 13:46	WAT	156-60-5	2
1,1-Dichloroethane	50	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-34-3	2
cis-1,2-Dichloroethene	51	ug/L	1	SW8260B	08/27/13 13:46	WAT	156-59-2	2
Chloroform	53	ug/L	1	SW8260B	08/27/13 13:46	WAT	67-66-3	2
1,1,1-Trichloroethane	57	ug/L	1	SW8260B	08/27/13 13:46	WAT	71-55-6	2
Cyclohexane	45	ug/L	1	SW8260B	08/27/13 13:46	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	54	ug/L	10	SW8260B	08/27/13 13:46	WAT	108-10-1	2
2-Hexanone	55	ug/L	10	SW8260B	08/27/13 13:46	WAT	591-78-6	2
Carbon tetrachloride	59	ug/L	1	SW8260B	08/27/13 13:46	WAT	56-23-5	2
Benzene	51	ug/L	1	SW8260B	08/27/13 13:46	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260B	08/27/13 13:46	WAT	107-06-2	2
Trichloroethene	52	ug/L	1	SW8260B	08/27/13 13:46	WAT	79-01-6	2
1,2-Dichloropropane	52	ug/L	1	SW8260B	08/27/13 13:46	WAT	78-87-5	2
Bromodichloromethane	59	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-27-4	2
Methyl cyclohexane	50	ug/L	1	SW8260B	08/27/13 13:46	WAT	108-87-2	2
cis-1,3-Dichloropropene	55	ug/L	1	SW8260B	08/27/13 13:46	WAT	10061-01-5	2
Toluene	53	ug/L	1	SW8260B	08/27/13 13:46	WAT	108-88-3	2
trans-1,3-Dichloropropene	57	ug/L	1	SW8260B	08/27/13 13:46	WAT	10061-02-6	2
1,1,2-Trichloroethane	53	ug/L	1	SW8260B	08/27/13 13:46	WAT	79-00-5	2
Tetrachloroethene	53	ug/L	1	SW8260B	08/27/13 13:46	WAT	127-18-4	2
Dibromochloromethane	55	ug/L	1	SW8260B	08/27/13 13:46	WAT	124-48-1	2
Chlorobenzene	52	ug/L	1	SW8260B	08/27/13 13:46	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	53	ug/L	1	SW8260B	08/27/13 13:46	WAT	79-34-5	2
Ethylbenzene	53	ug/L	1	SW8260B	08/27/13 13:46	WAT	100-41-4	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S57702.02 (continued)
Sample Tag: MW-12-16 (82013) MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
p,m-Xylene	102	ug/L	2	SW8260B	08/27/13 13:46	WAT		1
o-Xylene	54	ug/L	1	SW8260B	08/27/13 13:46	WAT	95-47-6	1
Styrene	52	ug/L	1	SW8260B	08/27/13 13:46	WAT	100-42-5	1
Isopropylbenzene	53	ug/L	1	SW8260B	08/27/13 13:46	WAT	98-82-8	1
Bromoform	54	ug/L	1	SW8260B	08/27/13 13:46	WAT	75-25-2	1
1,3-Dichlorobenzene	52	ug/L	1	SW8260B	08/27/13 13:46	WAT	541-73-1	1
1,4-Dichlorobenzene	52	ug/L	1	SW8260B	08/27/13 13:46	WAT	106-46-7	1
1,2-Dichlorobenzene	51	ug/L	1	SW8260B	08/27/13 13:46	WAT	95-50-1	1
1,2,4-Trichlorobenzene	47	ug/L	1	SW8260B	08/27/13 13:46	WAT	120-82-1	1
1,2-Dibromoethane	55	ug/L	1	SW8260B	08/27/13 13:46	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	47	ug/L	1	SW8260B	08/27/13 13:46	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57702.03
Sample Tag: MW-12-16 (82013) MSD
Collected Date/Time: 08/20/2013 09:45
Matrix: Groundwater
COC Reference: 75284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Metals								
Antimony	0.263	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-36-0	
Arsenic	0.278	mg/L	0.002	SW6020	09/04/13 15:19	PER	7440-38-2	
Barium	0.457	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-39-3	
Boron	0.33	mg/L	0.04	SW6020	09/04/13 15:19	PER	7440-42-8	
Cadmium	0.254	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-43-9	
Chromium	0.246	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-47-3	
Cobalt	0.244	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-48-4	
Copper	0.221	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-50-8	
Iron, Dissolved	6.36	mg/L	0.02	E200.8	09/04/13 16:12	PER	7439-89-6	
Lead	0.236	mg/L	0.003	SW6020	09/04/13 15:19	PER	7439-92-1	
Manganese, Dissolved	0.539	mg/L	0.005	E200.8	09/04/13 16:12	PER	7439-96-5	
Manganese	0.546	mg/L	0.005	SW6020	09/04/13 15:19	PER	7439-96-5	
Mercury	0.0020	mg/L	0.0001	SW7471A	08/22/13 15:41	CCM	7439-97-6	
Nickel	0.248	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-02-0	
Selenium	0.248	mg/L	0.005	SW6020	09/04/13 15:19	PER	7782-49-2	
Silver	0.241	mg/L	0.0005	SW6020	09/04/13 15:19	PER	7440-22-4	
Vanadium	0.249	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-62-2	
Zinc	0.244	mg/L	0.005	SW6020	09/04/13 15:19	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	42	ug/L	1	SW8270C	08/27/13 16:50	PL	83-32-9	1
Acenaphthylene	49	ug/L	1	SW8270C	08/27/13 16:50	PL	208-96-8	1
Acetophenone	37	ug/L	1	SW8270C	08/27/13 16:50	PL	98-86-2	1
Anthracene	43	ug/L	1	SW8270C	08/27/13 16:50	PL	120-12-7	1
Atrazine	39	ug/L	1	SW8270C	08/27/13 16:50	PL	1912-24-9	1
1,1'-Biphenyl	41	ug/L	1	SW8270C	08/27/13 16:50	PL	92-52-4	1
4-Bromophenyl phenyl ether	41	ug/L	1	SW8270C	08/27/13 16:50	PL	101-55-3	1
di-n-Butyl phthalate	47	ug/L	1	SW8270C	08/27/13 16:50	PL	84-74-2	1
Benzaldehyde	40	ug/L	1	SW8270C	08/27/13 16:50	PL	100-52-7	1
Benzo(a)anthracene	47	ug/L	1	SW8270C	08/27/13 16:50	PL	56-55-3	1
Benzo(a)pyrene	47	ug/L	1	SW8270C	08/27/13 16:50	PL	50-32-8	1
Benzo(b)fluoranthene	43	ug/L	1	SW8270C	08/27/13 16:50	PL	205-99-2	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57702.03 (continued)
Sample Tag: MW-12-16 (82013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Benzo(ghi)perylene	53	ug/L	1	SW8270C	08/27/13 16:50	PL	191-24-2	1
Benzo(k)fluoranthene	40	ug/L	1	SW8270C	08/27/13 16:50	PL	207-08-9	1
Butyl benzyl phthalate	45	ug/L	1	SW8270C	08/27/13 16:50	PL	85-68-7	1
2-Chloronaphthalene	40	ug/L	1	SW8270C	08/27/13 16:50	PL	91-58-7	1
2-Chlorophenol	38	ug/L	1	SW8270C	08/27/13 16:50	PL	95-57-8	1
4-Chloro-3-methylphenol	46	ug/L	1	SW8270C	08/27/13 16:50	PL	59-50-7	1
4-Chloroaniline	28	ug/L	1	SW8270C	08/27/13 16:50	PL	106-47-8	1
4-Chlorophenyl phenyl ether	44	ug/L	1	SW8270C	08/27/13 16:50	PL	7005-72-3	1
Caprolactam	5	ug/L	1	SW8270C	08/27/13 16:50	PL	105-60-2	1
Carbazole	42	ug/L	1	SW8270C	08/27/13 16:50	PL	86-74-8	1
bis(2-Chloroethoxy)methane	39	ug/L	1	SW8270C	08/27/13 16:50	PL	111-91-1	1
bis(2-Chloroethyl)ether	37	ug/L	1	SW8270C	08/27/13 16:50	PL	111-44-4	1
bis(2-Chloroisopropyl)ether	38	ug/L	1	SW8270C	08/27/13 16:50	PL	108-60-1	1
Chrysene	44	ug/L	1	SW8270C	08/27/13 16:50	PL	218-01-9	1
2,4-Dichlorophenol	43	ug/L	1	SW8270C	08/27/13 16:50	PL	120-83-2	1
2,4-Dimethylphenol	42	ug/L	1	SW8270C	08/27/13 16:50	PL	105-67-9	1
2,4-Dinitrophenol	36	ug/L	1	SW8270C	08/27/13 16:50	PL	51-28-5	1
2,4-Dinitrotoluene	39	ug/L	1	SW8270C	08/27/13 16:50	PL	121-14-2	1
2,6-Dinitrotoluene	44	ug/L	1	SW8270C	08/27/13 16:50	PL	606-20-2	1
4,6-Dinitro-2-methylphenol	39	ug/L	1	SW8270C	08/27/13 16:50	PL	534-52-1	1
Dibenzo(ah)anthracene	62	ug/L	2	SW8270C	08/27/13 16:50	PL	53-70-3	1
Dibenzofuran	44	ug/L	1	SW8270C	08/27/13 16:50	PL	132-64-9	1
Diethyl phthalate	45	ug/L	1	SW8270C	08/27/13 16:50	PL	84-66-2	1
Dimethyl phthalate	51	ug/L	1	SW8270C	08/27/13 16:50	PL	131-11-3	1
bis(2-Ethylhexyl)phthalate	47	ug/L	1	SW8270C	08/27/13 16:50	PL	117-81-7	1
Fluoranthene	44	ug/L	1	SW8270C	08/27/13 16:50	PL	206-44-0	1
Fluorene	44	ug/L	1	SW8270C	08/27/13 16:50	PL	86-73-7	1
Hexachlorobutadiene	32	ug/L	1	SW8270C	08/27/13 16:50	PL	87-68-3	1
Hexachlorocyclopentadiene	54	ug/L	1	SW8270C	08/27/13 16:50	PL	77-47-4	1
Hexachloroethane	29	ug/L	1	SW8270C	08/27/13 16:50	PL	67-72-1	1
Indeno(1,2,3-cd)pyrene	60	ug/L	1	SW8270C	08/27/13 16:50	PL	193-39-5	1
Isophorone	53	ug/L	1	SW8270C	08/27/13 16:50	PL	78-59-1	1
2-Methylnaphthalene	41	ug/L	1	SW8270C	08/27/13 16:50	PL	91-57-6	1
2-Methylphenol	44	ug/L	1	SW8270C	08/27/13 16:50	PL	95-48-7	1
3-, 4-Methylphenol	45	ug/L	1	SW8270C	08/27/13 16:50	PL	3/4-Cresol	1
2-Nitroaniline	44	ug/L	1	SW8270C	08/27/13 16:50	PL	88-74-4	1
2-Nitrophenol	38	ug/L	1	SW8270C	08/27/13 16:50	PL	88-75-5	1
3-Nitroaniline	35	ug/L	1	SW8270C	08/27/13 16:50	PL	99-09-2	1
4-Nitroaniline	38	ug/L	1	SW8270C	08/27/13 16:50	PL	100-01-6	1
4-Nitrophenol	34	ug/L	1	SW8270C	08/27/13 16:50	PL	100-02-7	1
N-Nitrosodi-n-propylamine	39	ug/L	1	SW8270C	08/27/13 16:50	PL	621-64-7	1
N-Nitrosodiphenylamine	40	ug/L	1	SW8270C	08/27/13 16:50	PL	86-30-6	1
Naphthalene	37	ug/L	1	SW8270C	08/27/13 16:50	PL	91-20-3	1
Nitrobenzene	39	ug/L	1	SW8270C	08/27/13 16:50	PL	98-95-3	1
di-n-Octyl phthalate	56	ug/L	1	SW8270C	08/27/13 16:50	PL	117-84-0	1
Pentachlorophenol	30	ug/L	1	SW8270C	08/27/13 16:50	PL	87-86-5	1
Phenanthrene	43	ug/L	1	SW8270C	08/27/13 16:50	PL	85-01-8	1
Phenol	27	ug/L	1	SW8270C	08/27/13 16:50	PL	108-95-2	1

1-Sample spiked at 50 mg/l

Lab Sample ID: S57702.03 (continued)
Sample Tag: MW-12-16 (82013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Pyrene	47	ug/L	1	SW8270C	08/27/13 16:50	PL	129-00-0	1
2,4,5-Trichlorophenol	55	ug/L	1	SW8270C	08/27/13 16:50	PL	95-95-4	1
2,4,6-Trichlorophenol	45	ug/L	1	SW8270C	08/27/13 16:50	PL	88-06-2	1
Hexachlorobenzene	41	ug/L	1	SW8270C	08/27/13 16:50	PL	118-74-1	1
Organics - Volatiles								
1,4-Dioxane	53	ug/L	5	SW8260B - SIM	08/26/13 22:28	WAT	123-91-1	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	52	ug/L	1	SW8260B	08/27/13 14:06	WAT	76-13-1	2
Acetone	40	ug/L	10	SW8260B	08/27/13 14:06	WAT	67-64-1	2
Carbon disulfide	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-15-0	2
Methyl Acetate	50	ug/L	10	SW8260B	08/27/13 14:06	WAT	79-20-9	2
tert-Methyl butyl ether (MTBE)	55	ug/L	1	SW8260B	08/27/13 14:06	WAT	1634-04-4	2
2-Butanone (MEK)	47	ug/L	10	SW8260B	08/27/13 14:06	WAT	78-93-3	2
Dichlorodifluoromethane	43	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-71-8	2
Chloromethane	44	ug/L	1	SW8260B	08/27/13 14:06	WAT	74-87-3	2
Vinyl chloride	45	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-01-4	2
Bromomethane	60	ug/L	1	SW8260B	08/27/13 14:06	WAT	74-83-9	2
Chloroethane	60	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-00-3	2
Trichlorofluoromethane	58	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-69-4	2
1,1-Dichloroethene	50	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-35-4	2
Methylene chloride	48	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-09-2	2
trans-1,2-Dichloroethene	50	ug/L	1	SW8260B	08/27/13 14:06	WAT	156-60-5	2
1,1-Dichloroethane	50	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-34-3	2
cis-1,2-Dichloroethene	51	ug/L	1	SW8260B	08/27/13 14:06	WAT	156-59-2	2
Chloroform	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	67-66-3	2
1,1,1-Trichloroethane	57	ug/L	1	SW8260B	08/27/13 14:06	WAT	71-55-6	2
Cyclohexane	47	ug/L	1	SW8260B	08/27/13 14:06	WAT	110-82-7	2
4-Methyl-2-pentanone (MIBK)	56	ug/L	10	SW8260B	08/27/13 14:06	WAT	108-10-1	2
2-Hexanone	56	ug/L	10	SW8260B	08/27/13 14:06	WAT	591-78-6	2
Carbon tetrachloride	60	ug/L	1	SW8260B	08/27/13 14:06	WAT	56-23-5	2
Benzene	50	ug/L	1	SW8260B	08/27/13 14:06	WAT	71-43-2	2
1,2-Dichloroethane	55	ug/L	1	SW8260B	08/27/13 14:06	WAT	107-06-2	2
Trichloroethene	52	ug/L	1	SW8260B	08/27/13 14:06	WAT	79-01-6	2
1,2-Dichloropropane	51	ug/L	1	SW8260B	08/27/13 14:06	WAT	78-87-5	2
Bromodichloromethane	59	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-27-4	2
Methyl cyclohexane	52	ug/L	1	SW8260B	08/27/13 14:06	WAT	108-87-2	2
cis-1,3-Dichloropropene	55	ug/L	1	SW8260B	08/27/13 14:06	WAT	10061-01-5	2
Toluene	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	108-88-3	2
trans-1,3-Dichloropropene	57	ug/L	1	SW8260B	08/27/13 14:06	WAT	10061-02-6	2
1,1,2-Trichloroethane	54	ug/L	1	SW8260B	08/27/13 14:06	WAT	79-00-5	2
Tetrachloroethene	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	127-18-4	2
Dibromochloromethane	54	ug/L	1	SW8260B	08/27/13 14:06	WAT	124-48-1	2
Chlorobenzene	52	ug/L	1	SW8260B	08/27/13 14:06	WAT	108-90-7	2
1,1,2,2-Tetrachloroethane	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	79-34-5	2
Ethylbenzene	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	100-41-4	2

1-Sample spiked at 50 mg/l
2-Spiked at 50ug/l

Lab Sample ID: S57702.03 (continued)
Sample Tag: MW-12-16 (82013) MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
p,m-Xylene	102	ug/L	2	SW8260B	08/27/13 14:06	WAT		1
o-Xylene	54	ug/L	1	SW8260B	08/27/13 14:06	WAT	95-47-6	1
Styrene	51	ug/L	1	SW8260B	08/27/13 14:06	WAT	100-42-5	1
Isopropylbenzene	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	98-82-8	1
Bromoform	54	ug/L	1	SW8260B	08/27/13 14:06	WAT	75-25-2	1
1,3-Dichlorobenzene	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	541-73-1	1
1,4-Dichlorobenzene	53	ug/L	1	SW8260B	08/27/13 14:06	WAT	106-46-7	1
1,2-Dichlorobenzene	52	ug/L	1	SW8260B	08/27/13 14:06	WAT	95-50-1	1
1,2,4-Trichlorobenzene	49	ug/L	1	SW8260B	08/27/13 14:06	WAT	120-82-1	1
1,2-Dibromoethane	55	ug/L	1	SW8260B	08/27/13 14:06	WAT	106-93-4	1
1,2-Dibromo-3-chloropropane	48	ug/L	1	SW8260B	08/27/13 14:06	WAT	96-12-8	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S57702.04
Sample Tag: MW-12-15 (82013)
Collected Date/Time: 08/20/2013 11:50
Matrix: Groundwater
COC Reference: 75284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 12:00	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Inorganics								
Alkalinity as CaCO3	560	mg/L	1	2320B	08/20/13 15:38	JDP		
Carbon Dioxide	312	mg/L	10	4500-CO2C	08/21/13 09:12	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/21/13 11:11	JDP	14797-55-8	
Sulfate	8	mg/L	5	E300.0	08/21/13 11:11	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020	09/04/13 15:03	PER	7440-38-2	
Arsenic	0.004	mg/L	0.002	SW6020	09/04/13 15:01	PER	7440-38-2	
Barium, Dissolved	0.296	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-39-3	
Barium	0.289	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020	09/04/13 15:03	PER	7440-42-8	
Boron	0.05	mg/L	0.04	SW6020	09/04/13 15:01	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-47-3	
Chromium	0.006	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-50-8	
Iron, Dissolved	10.1	mg/L	0.02	E200.8	09/04/13 15:03	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/04/13 15:03	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 15:01	PER	7439-92-1	
Manganese, Dissolved	0.335	mg/L	0.005	E200.8	09/04/13 15:03	PER	7439-96-5	
Manganese	0.335	mg/L	0.005	SW6020	09/04/13 15:01	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:58	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:56	CCM	7439-97-6	
Nickel, Dissolved	0.012	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-02-0	
Nickel	0.011	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:03	PER	7782-49-2	

Lab Sample ID: S57702.04 (continued)
Sample Tag: MW-12-15 (82013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 15:01	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/04/13 15:03	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 15:01	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-62-2	
Vanadium	0.005	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 15:03	PER	7440-66-6	
Zinc	Not detected	mg/L	0.005	SW6020	09/04/13 15:01	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/28/13 15:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	84-66-2	
Dimethyl phthalate	2	ug/L	1	SW8270C	08/28/13 15:07	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	87-68-3	

Lab Sample ID: S57702.04 (continued)
Sample Tag: MW-12-15 (82013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/28/13 15:07	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 15:48	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 16:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 16:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 16:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	110-82-7	

Lab Sample ID: S57702.04 (continued)
Sample Tag: MW-12-15 (82013)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 16:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 16:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 16:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 16:11	WAT	96-12-8	
Organics								
Methane in Water	260	ug/L	5.0	RSK-175	08/28/13 14:08	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57702.05
Sample Tag: Trip Blank
Collected Date/Time: 08/20/2013 07:00
Matrix: Liquid
COC Reference: 75284

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/28/13 10:45	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/26/13 16:06	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/27/13 16:32	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/27/13 16:32	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/27/13 16:32	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/27/13 16:32	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/27/13 16:32	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	79-34-5	

Lab Sample ID: S57702.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/27/13 16:32	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/27/13 16:32	WAT	96-12-8	

September 03, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308368	08/21/2013	S57702

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

This report shall not be reproduced, except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.
5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308368**
Project:	Subcontract Lab Services	Description:	S57702
Client Sample ID:	**57702.01**	Sampled:	08/20/13 09:45
Lab Sample ID:	**1308368-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**150**	2.0	ug/L	4	RSK-175	08/28/13 14:00	JMF	1309067

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308368**
Project:	Subcontract Lab Services	Description:	S57702
Client Sample ID:	**57702.04**	Sampled:	08/20/13 11:50
Lab Sample ID:	**1308368-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**260**	5.0	ug/L	10	RSK-175	08/28/13 14:08	JMF	1309067

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1309067 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/28/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29005	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/28/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29005	
Methane		33.0	**33.2**	100	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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26.32

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75456

E. 1308368

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557702
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	8/20	945	57702.01	GW	3		X						X	
02	↓	1150	57702.04	↓	↓		↓						↑	*Subcd to Trimatrix

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler	DATE: 8/20/13	TIME: 1605	
RECEIVED BY: SIGNATURE/ORGANIZATION: FedEx 466 477 03 5825 2008	DATE:	TIME:	
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	

RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE: 8-21-13	TIME: 1150	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL _____
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

TRIMATRIX LABORATORIES

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308368
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Tm 3222	1330	☐ None ☑ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1 4.1	-	4.1
2 4.5	-	4.5
3 4.2	-	4.2
Average °C		4.3

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☐	☑	Chain of Custody record(s)? If No, Initiated By _____
☐	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☐	☐	Average sample temperature ≤6° C?
☐	☐	☐	Was thermal preservation required?
☐	☐	☐	If "No", Project Chemist Approval Intials: _____
☐	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐	☐	Completed Sample Preservation Verification Form?
☐	☐	☐	Samples chemically preserved correctly?
☐	☐	☐	If "No", added orange tag?
☐	☐	☐	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☐	☐	Analysis Requested?
☐	☐	Sample ID matches COC?
☐	☐	Sample Date and Time matches COC?
☐		Container type completed on COC?
☐	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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C.O.C. PAGE # 1 OF 1

75284

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: LANCE ROGERS
COMPANY: ARCADIS
ADDRESS: 10559
CITY: BRIGHTON STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 8594 FAX NO.: 810 229 8837
E-MAIL ADDRESS: LANCE.ROGERS@ARCADIS-US.COM
P.O. NO.:
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: PLANT 6/ B006448I.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: STEVE SLATER
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Dotson ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR 2013 DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 1,4-D, Styrene	TCL SVOC's	TAL METALS	DISS Fe MN	Sulfate, Nitrate, Cor	Alkalinity	MeOH	DISS METALS		
57702.01	8/20	0945	MW-12-16 (82013)	GW	11	3	6	2					X	X	X	X	X	X	X	X	NO	$$
.02	8/20	0945	MW-12-16 MS (82013)	GW	7	2	3	2					X	X	X	X						
.03	8/20	0945	MW-12-16 MSD (82013)	GW	7	2	3	2					X	X	X	X						
.04	8/20	1150	MW-12-15 (82013)	GW	11	3	6	3					X	X	X	X	X	X	X	X		
.05	8/20	0700	TRIP BLANK	L	1	1							X									

$$

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] FMF ☒ Sampler DATE: 8/20/13 TIME: 1255
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature] DATE: 8/20/13 TIME: 1255

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Talenton Fedex DATE: 8/20/13 TIME: 1335

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.5

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S57697.01(01)
Generated on 09/06/2013

Report to

Attention: Lance Rogers
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57697.01-S57697.05
Project: Racer Lansing Plant 2 B0064479.2013
Collected Date: 08/19/2013
Submitted Date/Time: 08/20/2013 08:00
Sampled by: Cliff Walls
P.O. #: B0064479.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57697.01	MW-01(2)	Groundwater	08/19/2013 08:30
S57697.02	MW-03(2)	Groundwater	08/19/2013 10:30
S57697.03	P2-SB-03	Groundwater	08/19/2013 14:40
S57697.04	Equipment Blank-4	Groundwater	08/19/2013 00:01
S57697.05	Trip Blank	Groundwater	08/19/2013 08:00

Analytical Laboratory Report

Lab Sample ID: S57697.01
Sample Tag: MW-01(2)
Collected Date/Time: 08/19/2013 08:30
Matrix: Groundwater
COC Reference: 75303

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
3	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	465	mg/L	1	2320B	08/20/13 15:28	JDP		
Carbon Dioxide	261	mg/L	10	4500-CO2C	08/20/13 09:15	JDP		F
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/20/13 11:59	JDP	14797-55-8	
Sulfate	56	mg/L	5	E300.0	08/20/13 11:59	JDP	14808-79-8	
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-36-0	
Arsenic, Dissolved	0.003	mg/L	0.002	SW6020	09/04/13 14:51	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	09/04/13 14:47	PER	7440-38-2	
Barium, Dissolved	0.415	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-39-3	
Barium	0.404	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020	09/04/13 14:51	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	09/04/13 14:47	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-48-4	
Copper, Dissolved	0.017	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-50-8	
Copper	0.006	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-50-8	
Iron, Dissolved	1.43	mg/L	0.02	E200.8	09/04/13 14:51	PER	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020	09/04/13 14:51	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 14:47	PER	7439-92-1	
Manganese, Dissolved	0.120	mg/L	0.005	E200.8	09/04/13 14:51	PER	7439-96-5	
Manganese	0.020	mg/L	0.005	SW6020	09/04/13 14:47	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:27	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:25	CCM	7439-97-6	
Nickel, Dissolved	0.036	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-02-0	
Nickel	0.035	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-02-0	

F-Analysis run outside of holding time

Lab Sample ID: S57697.01 (continued)
Sample Tag: MW-01(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Selenium, Dissolved	0.006	mg/L	0.005	SW6020	09/04/13 14:51	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 14:47	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020	09/04/13 14:51	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 14:47	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-62-2	
Zinc, Dissolved	0.033	mg/L	0.005	SW6020	09/04/13 14:51	PER	7440-66-6	
Zinc	0.029	mg/L	0.005	SW6020	09/04/13 14:47	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 23:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/27/13 23:09	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	08/27/13 23:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	86-73-7	

Lab Sample ID: S57697.01 (continued)
Sample Tag: MW-01(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 23:09	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 17:44	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 15:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 15:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	13	ug/L	1	SW8260B	08/23/13 15:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 15:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	71-55-6	

Lab Sample ID: S57697.01 (continued)
Sample Tag: MW-01(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 15:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 15:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 15:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:10	WAT	96-12-8	
Organics								
Methane in Water	Not detected	ug/L	0.5	RSK-175	08/27/13 11:40	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57697.02
Sample Tag: MW-03(2)
Collected Date/Time: 08/19/2013 10:30
Matrix: Groundwater
COC Reference: 75303

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/22/13 23:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	485	mg/L	1	2320B	08/20/13 15:30	JDP		
Carbon Dioxide	264	mg/L	10	4500-CO2C	08/20/13 09:17	JDP		
Nitrate-N	5.3	mg/L	0.5	E300.0	08/20/13 12:11	JDP	14797-55-8	
Sulfate	99	mg/L	5	E300.0	08/20/13 12:11	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	09/04/13 14:53	PER	7440-38-2	
Barium	0.441	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-39-3	
Boron	0.18	mg/L	0.04	SW6020	09/04/13 14:53	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-47-3	
Cobalt	0.010	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-48-4	
Copper	0.005	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-50-8	
Iron, Dissolved	1.94	mg/L	0.02	E200.8	09/04/13 14:55	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 14:53	PER	7439-92-1	
Manganese, Dissolved	1.73	mg/L	0.005	E200.8	09/04/13 14:55	PER	7439-96-5	
Manganese	1.62	mg/L	0.005	SW6020	09/04/13 14:53	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:29	CCM	7439-97-6	
Nickel	0.062	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-02-0	
Selenium	0.009	mg/L	0.005	SW6020	09/04/13 14:53	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 14:53	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-62-2	
Zinc	0.009	mg/L	0.005	SW6020	09/04/13 14:53	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	92-52-4	

Lab Sample ID: S57697.02 (continued)
Sample Tag: MW-03(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 23:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	84-66-2	
Dimethyl phthalate	5	ug/L	1	SW8270C	08/27/13 23:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	91-20-3	

Lab Sample ID: S57697.02 (continued)
Sample Tag: MW-03(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 23:43	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 18:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 15:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 15:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	1	ug/L	1	SW8260B	08/23/13 15:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 15:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 15:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 15:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	124-48-1	

Lab Sample ID: S57697.02 (continued)
Sample Tag: MW-03(2)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 15:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:31	WAT	96-12-8	
Organics								
Methane in Water	8.2	ug/L	0.5	RSK-175	08/27/13 11:45	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57697.03
Sample Tag: P2-SB-03
Collected Date/Time: 08/19/2013 14:40
Matrix: Groundwater
COC Reference: 75303

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
6	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR
1	500ml Plastic	None	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Inorganics								
Alkalinity as CaCO3	269	mg/L	1	2320B	08/20/13 15:32	JDP		
Carbon Dioxide	102	mg/L	10	4500-CO2C	08/20/13 09:37	JDP		
Nitrate-N	Not detected	mg/L	0.5	E300.0	08/20/13 13:10	JDP	14797-55-8	
Sulfate	52	mg/L	5	E300.0	08/20/13 13:10	JDP	14808-79-8	
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-36-0	
Arsenic	0.020	mg/L	0.002	SW6020	09/04/13 14:57	PER	7440-38-2	
Barium	0.231	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-39-3	
Boron	0.05	mg/L	0.04	SW6020	09/04/13 14:57	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-50-8	
Iron, Dissolved	0.51	mg/L	0.02	E200.8	09/04/13 14:59	PER	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 14:57	PER	7439-92-1	
Manganese, Dissolved	0.075	mg/L	0.005	E200.8	09/04/13 14:59	PER	7439-96-5	
Manganese	0.077	mg/L	0.005	SW6020	09/04/13 14:57	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:31	CCM	7439-97-6	
Nickel	0.010	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 14:57	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 14:57	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-62-2	
Zinc	0.006	mg/L	0.005	SW6020	09/04/13 14:57	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	92-52-4	

Lab Sample ID: S57697.03 (continued)
Sample Tag: P2-SB-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 14:33	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	84-66-2	
Dimethyl phthalate	8	ug/L	1	SW8270C	08/27/13 14:33	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	91-20-3	

Lab Sample ID: S57697.03 (continued)
Sample Tag: P2-SB-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 14:33	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	5	ug/L	5	SW8260B - SIM	08/21/13 18:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 15:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 15:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 15:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 15:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 15:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	124-48-1	

Lab Sample ID: S57697.03 (continued)
Sample Tag: P2-SB-03

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 15:51	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 15:51	WAT	96-12-8	
Organics								
Methane in Water	110	ug/L	2.0	RSK-175	08/27/13 11:53	TRX		O

O-Analysis performed by outside laboratory. See attached report.

Analytical Laboratory Report

Lab Sample ID: S57697.04
Sample Tag: Equipment Blank-4
Collected Date/Time: 08/19/2013 00:01
Matrix: Groundwater
COC Reference: 75303

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	08/23/13 19:53	EMR		
Mercury Digestion	Completed			SW7471A	08/22/13 11:30	CCM		
Metal Digestion	Completed			3015A	09/04/13 11:00	PER		
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	09/04/13 14:31	PER	7440-38-2	
Barium	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-39-3	
Boron	Not detected	mg/L	0.04	SW6020	09/04/13 14:31	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020	09/04/13 14:31	PER	7439-92-1	
Manganese	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	08/22/13 15:33	CCM	7439-97-6	
Nickel	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020	09/04/13 14:31	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020	09/04/13 14:31	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	91-58-7	

Lab Sample ID: S57697.04 (continued)
Sample Tag: Equipment Blank-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	08/27/13 15:07	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	84-66-2	
Dimethyl phthalate	6	ug/L	1	SW8270C	08/27/13 15:07	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270C	08/27/13 15:07	PL	118-74-1	

Lab Sample ID: S57697.04 (continued)
Sample Tag: Equipment Blank-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 18:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 16:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 16:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 16:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 16:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 16:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 16:11	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	120-82-1	

Lab Sample ID: S57697.04 (continued)
Sample Tag: Equipment Blank-4

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:11	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S57697.05
Sample Tag: Trip Blank
Collected Date/Time: 08/19/2013 08:00
Matrix: Groundwater
COC Reference: 75303

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	08/21/13 14:00	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	08/21/13 18:57	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	08/23/13 16:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	08/23/13 16:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	08/23/13 16:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	08/23/13 16:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	08/23/13 16:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	79-34-5	

Lab Sample ID: S57697.05 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	08/23/13 16:31	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	08/23/13 16:31	WAT	96-12-8	

September 03, 2013

Merit Laboratories, Inc.
Attn: Tabitha Faust
2680 East Lansing Road
East Lansing, MI 48823

Project: Subcontract Lab Services

Dear Tabitha Faust,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1308367	08/21/2013	S57697

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

James D. McFadden
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308367**
Project:	Subcontract Lab Services	Description:	S57697
Client Sample ID:	**57697.01**	Sampled:	08/19/13 08:30
Lab Sample ID:	**1308367-01**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	<0.50	0.50	ug/L	1	RSK-175	08/27/13 11:40	JMF	1308930

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308367**
Project:	Subcontract Lab Services	Description:	S57697
Client Sample ID:	**57697.02**	Sampled:	08/19/13 10:30
Lab Sample ID:	**1308367-02**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**8.2**	0.50	ug/L	1	RSK-175	08/27/13 11:45	JMF	1308930

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Merit Laboratories, Inc.**	Work Order:	**1308367**
Project:	Subcontract Lab Services	Description:	S57697
Client Sample ID:	**57697.03**	Sampled:	08/19/13 14:40
Lab Sample ID:	**1308367-03**	Sampled By:	Merit's Client
Matrix:	Water	Received:	08/21/13 11:50

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	RL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**110**	2.0	ug/L	4	RSK-175	08/27/13 11:53	JMF	1308930

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	RL
QC Batch: 1308930 Method-Specific Extraction/RSK-175								
Method Blank					Analyzed:		08/27/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29004	
Methane			<0.50			--		0.50
Laboratory Control Sample					Analyzed:		08/27/2013	By: JMF
Unit: ug/L					Analytical Batch:		3H29004	
Methane		33.0	**36.3**	110	70-116	--		0.50

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STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program.
No Qualification is required.

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2631

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

75327

CHAIN OF CUSTODY RECORD E 1308367

REPORT TO

CONTACT NAME: Tabitha Faust
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: FAX NO.: P.O. NO.:
E-MAIL ADDRESS: QUOTE NO.:

INVOICE TO

CONTACT NAME: Julie Teague ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 557697
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other _____
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Methane	Special Instructions
01	6/19	830	57697.01	GW	3		X						X	
02	↓	1030	57697.02	↓	↓		↓						↓	* Subcd to Trimatrix
03		1440	57697.03											

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Tabitha Faust ☐ Sampler DATE: 8/20/13 TIME: 1600
RECEIVED BY: SIGNATURE/ORGANIZATION: 1Z 466 477 03 5825 2008 DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: 8.21.13 TIME: 1150

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL _____

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Merit Labs | Work Order #: 1308367
Receipt Record Page/Line #: 26- | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 8.21.13 | ☑ Cooler ☐ Box ☐ Other | Qty Received: 1 | Thermometer Used: ☐ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
Tm 3222	1330	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☑ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1	4.1	-	4.1
2	4.5	-	4.5
3	4.2	-	4.2
Average °C			4.3
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes / No
- ☐ ☐ Chain of Custody record(s)? If No, Initiated By _____
- ☐ ☐ Received for Lab Signed/Date/Time?
- ☐ ☐ Shipping document?
- ☐ ☐ Other _____

COC Information

☐ TriMatrix COC ☐ Other Merit

COC ID Numbers:

Check COC for Accuracy

Yes / No
- ☐ ☐ Analysis Requested?
- ☐ ☐ Sample ID matches COC?
- ☐ ☐ Sample Date and Time matches COC?
- ☐ ☐ Container type completed on COC?
- ☐ ☐ All container types indicated are received?

Check Sample Preservation

N/A / Yes / No
- ☐ ☐ ☐ Average sample temperature ≤6° C?
- ☐ ☐ ☐ Was thermal preservation required?
- ☐ ☐ ☐ If "No", Project Chemist Approval Intials: _____
- ☐ ☐ ☐ If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- ☐ ☐ ☐ Completed Sample Preservation Verification Form?
- ☐ ☐ ☐ Samples chemically preserved correctly?
- ☐ ☐ ☐ If "No", added orange tag?
- ☐ ☐ ☐ Received pre-preserved VOC soils?
  - ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☐ NONE RECEIVED
- ☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A / Yes / No
- ☐ ☐ ☐ Broken containers/lids?
- ☐ ☐ ☐ Missing or incomplete labels?
- ☐ ☐ ☐ Illegible information on labels?
- ☐ ☐ ☐ Low volume received?
- ☐ ☐ ☐ Inappropriate or non-TriMatrix containers received?
- ☐ ☐ ☐ VOC vials / TOX containers have headspace?
- ☐ ☐ ☐ Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
8.21.13 1150	8.21.13 1340	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

75303

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lance Rogers
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE:
PHONE NO.: 810 229 5894 FAX NO.: 810 P.O. NO.:
E-MAIL ADDRESS: Lance.Rogers@arcadis.us.com QUOTE NO.:

INVOICE TO

CONTACT NAME ☑ SAME
COMPANY
ADDRESS
CITY STATE ZIP CODE
PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME: Karn Plant 2 [redacted] 6006.2013.447
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wiis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☑ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs Sm 1-4	TCL SVOCs	TAL Metals	Diss Tot Metals	Diss Fe, Mn	Alk, Cl, SO4, Nit					
57697.01	8/19/13	8:30	MW-01(2)	GW	6	3	6	3					X	X	X	X	X	X					
.02	8/19/13	10:30	MW-03(2)	GW	11	3	6	2					X	X	X		X	X					
.03	8/19/13	1440	P2-SB-03	GW	11	3	6	2					X	X	X		X	X					
.04	8/19/13	—	Equipment Blank - 4	GW	6	2	3	1					X	X	X								
.05	8/19/13	8:00	Trip Blank	GW	3		3						X										

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☑ Sampler	DATE 8/19/13	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION	Steve Stelter PMC	DATE 8/19/13	TIME	
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Dropbox	DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION	Tabatha Frent	DATE 8/20/13	TIME 800	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Steve Stelter PMC	DATE 8/19/13	TIME 1750	
RECEIVED BY: SIGNATURE/ORGANIZATION	Merit Labs	DATE 8/19/13	TIME 1750	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Revised Report

Report ID: S55259.01(02)
Generated on 02/05/2013
Replaces report S55259.01(01) generated on 01/23/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55259.01-S55259.08
Project: B0064481.2012.00105
Collected Date: 01/18/2013
Submitted Date/Time: 01/18/2013 15:35
Sampled by: Randy Christensen
P.O. #: B0064481.2012.0

Sample tag changed on .05 per client request

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55259.01	P6-MH2-SW-011813	Groundwater	01/18/2013 10:40
S55259.02	P2-MH-NW-011813	Groundwater	01/18/2013 11:40
S55259.03	P2-OUTFALL@P3-011813	Groundwater	01/18/2013 12:40
S55259.04	P3-MH-S-011813	Groundwater	01/18/2013 13:20
S55259.05	P3-MH-NE-011813	Groundwater	01/18/2013 14:00
S55259.06	P6-MH-NE-011813	Groundwater	01/18/2013 14:20
S55259.07	P3-MH-3 Bottle 1	Groundwater	01/18/2013 14:00
S55259.08	P3-MH-3 Bottle 2	Groundwater	01/18/2013 14:00

Lab Sample ID: S55259.01
Sample Tag: P6-MH2-SW-011813
Collected Date/Time: 01/18/2013 10:40
Matrix: Groundwater
COC Reference: 79604

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	01/21/13 14:48	EMR		
Mercury Digestion	Completed			SW7471A	01/21/13 12:10	JRH		
Metal Digestion	Completed			3015A	01/21/13 01:00	SLR		
pH check for VOCs	<2	STD Units		N/A	01/21/13 13:45	WAT		
Metals								
Antimony	0.002	mg/L	0.002	SW6020	01/21/13 16:33	SLS	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	01/21/13 16:33	SLS	7440-38-2	
Barium	0.049	mg/L	0.010	SW6020	01/21/13 16:33	SLS	7440-39-3	
Boron	0.26	mg/L	0.04	SW6020	01/21/13 16:33	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	SW6020	01/21/13 16:33	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	01/21/13 16:33	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	01/21/13 16:33	SLS	7440-48-4	
Copper	0.006	mg/L	0.002	SW6020	01/21/13 16:33	SLS	7440-50-8	
Lead	0.011	mg/L	0.002	SW6020	01/21/13 16:33	SLS	7439-92-1	
Manganese	0.075	mg/L	0.010	SW6020	01/21/13 16:33	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	01/21/13 15:55	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	01/21/13 16:33	SLS	7440-02-0	
Selenium	0.006	mg/L	0.002	SW6020	01/21/13 16:33	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	SW6020	01/21/13 16:33	SLS	7440-22-4	
Vanadium	0.004	mg/L	0.002	SW6020	01/21/13 16:33	SLS	7440-62-2	
Zinc	0.030	mg/L	0.010	SW6020	01/21/13 16:33	SLS	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	01/22/13 14:52	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	85-68-7	

B-Compound also found in associated method blank

Lab Sample ID: S55259.01 (continued)
Sample Tag: P6-MH2-SW-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	01/22/13 14:52	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	01/22/13 14:52	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 14:52	PL	88-06-2	

Lab Sample ID: S55259.01 (continued)
Sample Tag: P6-MH2-SW-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	01/21/13 14:35	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	76-13-1	
Acetone	22	ug/L	10	SW8260B	01/21/13 15:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	01/21/13 15:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	01/21/13 15:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	01/21/13 15:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	01/21/13 15:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	79-34-5	
Ethylbenzene	10	ug/L	1	SW8260B	01/21/13 15:30	WAT	100-41-4	
p,m-Xylene	51	ug/L	2	SW8260B	01/21/13 15:30	WAT		
o-Xylene	13	ug/L	1	SW8260B	01/21/13 15:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	120-82-1	

Lab Sample ID: S55259.01 (continued)
Sample Tag: P6-MH2-SW-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	01/21/13 15:30	WAT	96-12-8	

Lab Sample ID: S55259.02
Sample Tag: P2-MH-NW-011813
Collected Date/Time: 01/18/2013 11:40
Matrix: Groundwater
COC Reference: 79604

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	01/21/13 14:48	EMR		
Mercury Digestion	Completed			SW7471A	01/21/13 12:10	JRH		
Metal Digestion	Completed			3015A	01/21/13 01:00	SLR		
pH check for VOCs	<2	STD Units		N/A	01/21/13 13:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	01/21/13 16:37	SLS	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	01/21/13 16:37	SLS	7440-38-2	
Barium	0.075	mg/L	0.010	SW6020	01/21/13 16:37	SLS	7440-39-3	
Boron	0.23	mg/L	0.04	SW6020	01/21/13 16:37	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	SW6020	01/21/13 16:37	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	01/21/13 16:37	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	01/21/13 16:37	SLS	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	01/21/13 16:37	SLS	7440-50-8	
Lead	0.005	mg/L	0.002	SW6020	01/21/13 16:37	SLS	7439-92-1	
Manganese	0.132	mg/L	0.010	SW6020	01/21/13 16:37	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	01/21/13 15:57	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	01/21/13 16:37	SLS	7440-02-0	
Selenium	Not detected	mg/L	0.002	SW6020	01/21/13 16:37	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	SW6020	01/21/13 16:37	SLS	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	01/21/13 16:37	SLS	7440-62-2	
Zinc	0.028	mg/L	0.010	SW6020	01/21/13 16:37	SLS	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	91-58-7	

Lab Sample ID: S55259.02 (continued)
Sample Tag: P2-MH-NW-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	01/22/13 15:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 15:27	PL	88-06-2	

Lab Sample ID: S55259.02 (continued)
Sample Tag: P2-MH-NW-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	18	ug/L	5	SW8260B - SIM	01/21/13 14:53	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	01/21/13 15:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	01/21/13 15:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	01/21/13 15:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	156-60-5	
1,1-Dichloroethane	1	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	01/21/13 15:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	01/21/13 15:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	01/21/13 15:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	120-82-1	

Lab Sample ID: S55259.02 (continued)
Sample Tag: P2-MH-NW-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	01/21/13 15:50	WAT	96-12-8	

Lab Sample ID: S55259.03
Sample Tag: P2-OUTFALL@P3-011813
Collected Date/Time: 01/18/2013 12:40
Matrix: Groundwater
COC Reference: 79604

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	01/21/13 14:48	EMR		
Mercury Digestion	Completed			SW7471A	01/21/13 12:10	JRH		
Metal Digestion	Completed			3015A	01/21/13 01:00	SLR		
pH check for VOCs	<2	STD Units		N/A	01/21/13 13:45	WAT		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	01/21/13 16:41	SLS	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	01/21/13 16:41	SLS	7440-38-2	
Barium	0.103	mg/L	0.010	SW6020	01/21/13 16:41	SLS	7440-39-3	
Boron	0.16	mg/L	0.04	SW6020	01/21/13 16:41	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	SW6020	01/21/13 16:41	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	01/21/13 16:41	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	01/21/13 16:41	SLS	7440-48-4	
Copper	0.002	mg/L	0.002	SW6020	01/21/13 16:41	SLS	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	01/21/13 16:41	SLS	7439-92-1	
Manganese	0.055	mg/L	0.010	SW6020	01/21/13 16:41	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	01/21/13 15:59	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	01/21/13 16:41	SLS	7440-02-0	
Selenium	Not detected	mg/L	0.002	SW6020	01/21/13 16:41	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	SW6020	01/21/13 16:41	SLS	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	01/21/13 16:41	SLS	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	01/21/13 16:41	SLS	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	91-58-7	

Lab Sample ID: S55259.03 (continued)
Sample Tag: P2-OUTFALL@P3-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	01/22/13 16:01	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:01	PL	88-06-2	

Lab Sample ID: S55259.03 (continued)
Sample Tag: P2-OUTFALL@P3-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	10	ug/L	5	SW8260B - SIM	01/21/13 15:10	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	01/21/13 16:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	01/21/13 16:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	01/21/13 16:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	01/21/13 16:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	01/21/13 16:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	01/21/13 16:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	120-82-1	

Lab Sample ID: S55259.03 (continued)
Sample Tag: P2-OUTFALL@P3-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	01/21/13 16:10	WAT	96-12-8	

Lab Sample ID: S55259.04
Sample Tag: P3-MH-S-011813
Collected Date/Time: 01/18/2013 13:20
Matrix: Groundwater
COC Reference: 79604

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	01/21/13 14:48	EMR		
pH check for VOCs	<2	STD Units		N/A	01/21/13 13:45	WAT		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	01/22/13 16:35	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	01/22/13 16:35	PL	117-81-7	

Lab Sample ID: S55259.04 (continued)
Sample Tag: P3-MH-S-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 16:35	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	12	ug/L	5	SW8260B - SIM	01/21/13 15:28	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	01/21/13 16:30	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	01/21/13 16:30	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	01/21/13 16:30	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	67-66-3	

Lab Sample ID: S55259.04 (continued)
Sample Tag: P3-MH-S-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	01/21/13 16:30	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	01/21/13 16:30	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	01/21/13 16:30	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	01/21/13 16:30	WAT	96-12-8	

Lab Sample ID: S55259.05
Sample Tag: P3-MH-NE-011813
Collected Date/Time: 01/18/2013 14:00
Matrix: Groundwater
COC Reference: 79604

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	01/21/13 14:48	EMR		
pH check for VOCs	<2	STD Units		N/A	01/21/13 13:45	WAT		
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	01/22/13 17:09	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	01/22/13 17:09	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	131-11-3	

B-Compound also found in associated method blank

Lab Sample ID: S55259.05 (continued)
Sample Tag: P3-MH-NE-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270C	01/22/13 17:09	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:09	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	01/21/13 15:45	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	01/21/13 16:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	01/21/13 16:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	01/21/13 16:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	156-59-2	

Lab Sample ID: S55259.05 (continued)
Sample Tag: P3-MH-NE-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chloroform	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	01/21/13 16:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	01/21/13 16:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	01/21/13 16:50	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	01/21/13 16:50	WAT	96-12-8	

Lab Sample ID: S55259.06
Sample Tag: P6-MH-NE-011813
Collected Date/Time: 01/18/2013 14:20
Matrix: Groundwater
COC Reference: 79604

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.0	IR
2	1L Amber	None	Yes	4.0	IR
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	01/21/13 14:48	EMR		
Mercury Digestion	Completed			SW7471A	01/21/13 12:10	JRH		
Metal Digestion	Completed			3015A	01/21/13 01:00	SLR		
pH check for VOCs	<2	STD Units		N/A	01/21/13 14:00	WAT		
Metals								
Antimony	0.004	mg/L	0.002	SW6020	01/21/13 16:45	SLS	7440-36-0	
Arsenic	0.006	mg/L	0.002	SW6020	01/21/13 16:45	SLS	7440-38-2	
Barium	0.177	mg/L	0.010	SW6020	01/21/13 16:45	SLS	7440-39-3	
Boron	0.13	mg/L	0.04	SW6020	01/21/13 16:45	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	SW6020	01/21/13 16:45	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	01/21/13 16:45	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	01/21/13 16:45	SLS	7440-48-4	
Copper	Not detected	mg/L	0.002	SW6020	01/21/13 16:45	SLS	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	01/21/13 16:45	SLS	7439-92-1	
Manganese	0.341	mg/L	0.010	SW6020	01/21/13 16:45	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	01/21/13 16:01	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	01/21/13 16:45	SLS	7440-02-0	
Selenium	Not detected	mg/L	0.002	SW6020	01/21/13 16:45	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	SW6020	01/21/13 16:45	SLS	7440-22-4	
Vanadium	0.003	mg/L	0.002	SW6020	01/21/13 16:45	SLS	7440-62-2	
Zinc	0.025	mg/L	0.010	SW6020	01/21/13 16:45	SLS	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	101-55-3	
di-n-Butyl phthalate	2	ug/L	1	SW8270C	01/22/13 17:43	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	85-68-7	

B-Compound also found in associated method blank

Lab Sample ID: S55259.06 (continued)
Sample Tag: P6-MH-NE-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	01/22/13 17:43	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	01/22/13 17:43	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	86-30-6	
Naphthalene	1	ug/L	1	SW8270C	01/22/13 17:43	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/22/13 17:43	PL	88-06-2	

Lab Sample ID: S55259.06 (continued)
Sample Tag: P6-MH-NE-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	01/21/13 16:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	01/21/13 17:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	01/21/13 17:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	01/21/13 17:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-34-3	
cis-1,2-Dichloroethene	1	ug/L	1	SW8260B	01/21/13 17:10	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	01/21/13 17:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	01/21/13 17:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	56-23-5	
Benzene	2	ug/L	1	SW8260B	01/21/13 17:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-27-4	
Methyl cyclohexane	1	ug/L	1	SW8260B	01/21/13 17:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	10061-01-5	
Toluene	1	ug/L	1	SW8260B	01/21/13 17:10	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	100-41-4	
p,m-Xylene	3	ug/L	2	SW8260B	01/21/13 17:10	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	120-82-1	

Lab Sample ID: S55259.06 (continued)
Sample Tag: P6-MH-NE-011813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	01/21/13 17:10	WAT	96-12-8	

Lab Sample ID: S55259.07
Sample Tag: P3-MH-3 Bottle 1
Collected Date/Time: 01/18/2013 14:00
Matrix: Groundwater
COC Reference: 79604

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	01/21/13 12:10	JRH		
Metal Digestion	Completed			3015A	01/21/13 01:00	SLR		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	01/21/13 16:50	SLS	7440-36-0	
Arsenic	0.002	mg/L	0.002	SW6020	01/21/13 16:50	SLS	7440-38-2	
Barium	0.100	mg/L	0.010	SW6020	01/21/13 16:50	SLS	7440-39-3	
Boron	0.19	mg/L	0.04	SW6020	01/21/13 16:50	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	SW6020	01/21/13 16:50	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	01/21/13 16:50	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	01/21/13 16:50	SLS	7440-48-4	
Copper	0.002	mg/L	0.002	SW6020	01/21/13 16:50	SLS	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	01/21/13 16:50	SLS	7439-92-1	
Manganese	0.144	mg/L	0.010	SW6020	01/21/13 16:50	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	01/21/13 16:03	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	01/21/13 16:50	SLS	7440-02-0	
Selenium	Not detected	mg/L	0.002	SW6020	01/21/13 16:50	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	SW6020	01/21/13 16:50	SLS	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	01/21/13 16:50	SLS	7440-62-2	
Zinc	0.010	mg/L	0.010	SW6020	01/21/13 16:50	SLS	7440-66-6	

Lab Sample ID: S55259.08
Sample Tag: P3-MH-3 Bottle 2
Collected Date/Time: 01/18/2013 14:00
Matrix: Groundwater
COC Reference: 79604

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	125ml Plastic	HNO3	Yes	4.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471A	01/21/13 12:10	JRH		
Metal Digestion	Completed			3015A	01/21/13 01:00	SLR		
Metals								
Antimony	Not detected	mg/L	0.002	SW6020	01/21/13 16:54	SLS	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020	01/21/13 16:54	SLS	7440-38-2	
Barium	0.059	mg/L	0.010	SW6020	01/21/13 16:54	SLS	7440-39-3	
Boron	0.20	mg/L	0.04	SW6020	01/21/13 16:54	SLS	7440-42-8	
Cadmium	Not detected	mg/L	0.001	SW6020	01/21/13 16:54	SLS	7440-43-9	
Chromium	Not detected	mg/L	0.010	SW6020	01/21/13 16:54	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	01/21/13 16:54	SLS	7440-48-4	
Copper	0.003	mg/L	0.002	SW6020	01/21/13 16:54	SLS	7440-50-8	
Lead	Not detected	mg/L	0.002	SW6020	01/21/13 16:54	SLS	7439-92-1	
Manganese	0.028	mg/L	0.010	SW6020	01/21/13 16:54	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	01/21/13 16:05	JRT	7439-97-6	
Nickel	Not detected	mg/L	0.010	SW6020	01/21/13 16:54	SLS	7440-02-0	
Selenium	Not detected	mg/L	0.002	SW6020	01/21/13 16:54	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	SW6020	01/21/13 16:54	SLS	7440-22-4	
Vanadium	Not detected	mg/L	0.002	SW6020	01/21/13 16:54	SLS	7440-62-2	
Zinc	Not detected	mg/L	0.010	SW6020	01/21/13 16:54	SLS	7440-66-6	

Merit Laboratories, Inc.

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Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

79604

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: RANDY CHRISTENSEN
COMPANY: ARCADIS
ADDRESS:
CITY: BRIGHTON STATE: MI ZIP CODE:
PHONE NO.: 810 225 1940 FAX NO.: P.O. NO.: TBP
E-MAIL ADDRESS: RANDY.CHRISTENSEN@ARCADIS-US.COM QUOTE NO.:

INVOICE TO

CONTACT NAME: ~~[illegible]~~ ACCOUNTS PAYABLE ☐ SAME
COMPANY: ARCADIS
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B006448I.2012.00105
SAMPLER(S) - PLEASE PRINT/SIGN NAME: RANDY CHRISTENSEN

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☒ 3 DAYS ☐ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4-D (SIMS)	SVOCs	METALS	METALS - FILTERED							
55259.01	1.18.13	1040	P6-MH2-SW-011813	GW	5	2	2	1					✓	✓	✓								
.02	"	1140	P2-MH-NW-011813	"	"	2	2	1					✓	✓	✓								
.03	"	1240	P2-OUTFALL@P3-011813	"	"	2	2	1					✓	✓	✓								
.04	"	1320	P3-MH-S-011813	"	"	2	2	1					✓	✓	✓								
.05	"	1400	P3-MH-N-011813	"	"	2	2	1					✓	✓	✓								
.06	"	1420	P6-MH-NW-011813	"	"	2	2	1					✓	✓	✓								

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☐ Sampler DATE 1.18.13 TIME 1535
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Tallulah Faust DATE 1/18/13 TIME 1535

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S55320.01(01)
Generated on 01/31/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55320.01-S55320.02
Project: Racer Lansing Plant 6
Collected Date: 01/28/2013
Submitted Date/Time: 01/29/2013 10:40
Sampled by: Christine Snyder
P.O. #: B0064480.2012

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55320.01	MW-12-13_01282013	Groundwater	01/28/2013 17:40
S55320.02	Trip Blank	Water	01/28/2013 00:01

Analytical Laboratory Report

Lab Sample ID: S55320.01
Sample Tag: MW-12-13_01282013
Collected Date/Time: 01/28/2013 17:40
Matrix: Groundwater
COC Reference: 79626

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	8.8	IR
4	1L Amber	None	Yes	8.8	IR
2	125ml Plastic	HNO3	Yes	8.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	01/29/13 20:23	EMR		
BNA Extraction	Completed			3510C	01/29/13 20:24	EMR		
Extraction, PCB	Completed			3510C	01/29/13 12:30	ADB		
Mercury Digestion	Completed			SW7471A	01/31/13 11:15	JRH		
Mercury Digestion	Completed			SW7471A	01/31/13 11:15	JRH		
Metal Digestion	Completed			3015A	01/30/13 01:00	SLR		
Metal Digestion	Completed			3015A	01/30/13 01:00	SLR		
pH check for VOCs	<2	STD Units		N/A	01/30/13 10:14	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	01/31/13 14:13	SLS	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	01/31/13 14:04	SLS	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	01/31/13 14:13	SLS	7440-38-2	
Arsenic	0.002	mg/L	0.002	SW6020	01/31/13 14:04	SLS	7440-38-2	
Barium, Dissolved	0.173	mg/L	0.010	SW6020	01/31/13 14:13	SLS	7440-39-3	
Barium	0.184	mg/L	0.010	SW6020	01/31/13 14:04	SLS	7440-39-3	
Boron, Dissolved	0.06	mg/L	0.04	SW6020	01/31/13 16:17	SLS	7440-42-8	
Boron	0.08	mg/L	0.04	SW6020	01/31/13 16:12	SLS	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.001	SW6020	01/31/13 14:13	SLS	7440-43-9	
Cadmium	Not detected	mg/L	0.001	SW6020	01/31/13 14:04	SLS	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	01/31/13 14:13	SLS	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	01/31/13 14:04	SLS	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	01/31/13 14:13	SLS	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	01/31/13 14:04	SLS	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	01/31/13 14:13	SLS	7440-50-8	
Copper	Not detected	mg/L	0.002	SW6020	01/31/13 14:04	SLS	7440-50-8	
Lead, Dissolved	0.002	mg/L	0.002	SW6020	01/31/13 14:13	SLS	7439-92-1	
Lead	0.003	mg/L	0.002	SW6020	01/31/13 14:04	SLS	7439-92-1	
Manganese, Dissolved	0.176	mg/L	0.010	SW6020	01/31/13 14:13	SLS	7439-96-5	
Manganese	0.204	mg/L	0.010	SW6020	01/31/13 14:04	SLS	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	01/31/13 16:53	JRT	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	01/31/13 16:51	JRT	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	SW6020	01/31/13 14:13	SLS	7440-02-0	
Nickel	Not detected	mg/L	0.010	SW6020	01/31/13 14:04	SLS	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	01/31/13 14:13	SLS	7782-49-2	
Selenium	Not detected	mg/L	0.002	SW6020	01/31/13 14:04	SLS	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	01/31/13 14:13	SLS	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	01/31/13 14:04	SLS	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	01/31/13 14:13	SLS	7440-62-2	
Vanadium	0.002	mg/L	0.002	SW6020	01/31/13 14:04	SLS	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	01/31/13 14:13	SLS	7440-66-6	

Lab Sample ID: S55320.01 (continued)
Sample Tag: MW-12-13_01282013

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Zinc	Not detected	mg/L	0.010	SW6020	01/31/13 14:04	SLS	7440-66-6	
Organics - PCBs/Pesticides								
PCB								
PCB-1016	Not detected	ug/L	0.05	E608	01/29/13 13:26	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	01/29/13 13:26	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	01/29/13 13:26	JAN	11141-16-5	
PCB-1242	Not detected	ug/L	0.1	E608	01/29/13 13:26	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	01/29/13 13:26	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	01/29/13 13:26	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	01/29/13 13:26	JAN	11096-82-5	
PCB, Total	Not detected	ug/L	0.05	E608	01/29/13 13:26	JAN	1336-36-3	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics, Dissolved								
Acenaphthene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	SW8270C	01/30/13 16:50	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	01/30/13 16:50	PL	84-66-2	

Lab Sample ID: S55320.01 (continued)
Sample Tag: MW-12-13_01282013

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics, Dissolved (continued)								
Dimethyl phthalate	Not detected	ug/L	2	SW8270C	01/30/13 16:50	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	SW8270C	01/30/13 16:50	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:50	PL	88-06-2	
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	106-47-8	

Lab Sample ID: S55320.01 (continued)
Sample Tag: MW-12-13_01282013

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	01/30/13 16:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	01/30/13 16:16	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	01/29/13 13:57	WAT	123-91-1	

Lab Sample ID: S55320.01 (continued)
Sample Tag: MW-12-13_01282013

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	01/29/13 15:06	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	01/29/13 15:06	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	01/29/13 15:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	01/29/13 15:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	01/29/13 15:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	01/29/13 15:06	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	01/29/13 15:06	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S55320.02
Sample Tag: Trip Blank
Collected Date/Time: 01/28/2013 00:01
Matrix: Water
COC Reference: 79626

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	8.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	01/30/13 10:14	WAT		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	01/29/13 13:39	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	01/29/13 14:46	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	01/29/13 14:46	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	01/29/13 14:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	01/29/13 14:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	01/29/13 14:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	79-34-5	

Lab Sample ID: S55320.02 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	01/29/13 14:46	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	01/29/13 14:46	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

79626

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr Ste 100
CITY: Brighton | STATE: MI | ZIP CODE: 48116
PHONE NO.: 810-225-1940 | FAX NO.:
P.O. NO.: 000.4480.2012
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com
QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: | STATE: | ZIP CODE:
PHONE NO.: | E-MAIL ADDRESS:

PROJECT NO./NAME: RACER Lansing Plant 6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Christine Snyder / Christine Snyder

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC + 1,4-dioxane	SVOCs	PCBs	Metals (TOTAL + Dissolved)	Special Instructions
55320.01	1-28-13	1740	MW-12-13_01282013	GW	8	4	2	2					X	X	X	X	Note: see label for filtered / unfiltered
			Trip Blank	W			1						X				

To Brighton cold storage

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Christine Snyder / ARCADIS	☒ Sampler	DATE 1-28-13	TIME 1930
RECEIVED BY: SIGNATURE/ORGANIZATION	Jane M Kaye		DATE 1-29-13	TIME 0930
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Jane M Kaye		DATE 1-29-13	TIME 1040
RECEIVED BY: SIGNATURE/ORGANIZATION			DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION			DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Andrea Ball		DATE 29JAN13	TIME 1040
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL 8.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS		

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Revised Report

Report ID: S55359.01(02)
Generated on 03/04/2013
Replaces report S55359.01(01) generated on 02/04/2013

Report to

Attention: Randy Christensen/ Jeff Davin
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55359.01
Project: RACER Lansing Plant 6
Collected Date: 01/29/2013
Submitted Date/Time: 01/31/2013 14:30
Sampled by: Lance Rogers
P.O. #: B0064481.2013

Per request sample tag for sample .01 changed.

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55359.01	MW-04-06(6)_01292013	Groundwater	01/29/2013 00:01

Lab Sample ID: S55359.01
Sample Tag: MW-04-06(6)_01292013
Collected Date/Time: 01/29/2013 00:01
Matrix: Groundwater
COC Reference: 79625

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	4.6	IR
1	1L Amber	None	Yes	4.6	IR
1	125ml Plastic	HNO3	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	02/01/13 19:21	EMR		
Mercury Digestion	Completed			SW7471A	02/04/13 11:30	JRH		
Metal Digestion	Completed			3015A	02/04/13 01:00	SLR		
pH check for VOCs	<2	STD Units		N/A	02/04/13 10:15	WAT		
Metals								
Antimony	0.003	mg/L	0.002	SW6020	02/04/13 13:52	SLS	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020	02/04/13 13:52	SLS	7440-38-2	
Barium	0.868	mg/L	0.010	SW6020	02/04/13 13:52	SLS	7440-39-3	
Boron	0.09	mg/L	0.04	SW6020	02/04/13 15:51	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.001	SW6020	02/04/13 13:52	SLS	7440-43-9	
Chromium	0.033	mg/L	0.010	SW6020	02/04/13 13:52	SLS	7440-47-3	
Cobalt	Not detected	mg/L	0.010	SW6020	02/04/13 13:52	SLS	7440-48-4	
Copper	0.040	mg/L	0.002	SW6020	02/04/13 13:52	SLS	7440-50-8	
Lead	0.005	mg/L	0.002	SW6020	02/04/13 13:52	SLS	7439-92-1	
Manganese	0.040	mg/L	0.010	SW6020	02/04/13 13:52	SLS	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471A	02/04/13 14:31	JRT	7439-97-6	
Nickel	0.041	mg/L	0.010	SW6020	02/04/13 15:51	PER	7440-02-0	
Selenium	Not detected	mg/L	0.002	SW6020	02/04/13 13:52	SLS	7782-49-2	
Silver	Not detected	mg/L	0.0002	SW6020	02/04/13 13:52	SLS	7440-22-4	
Vanadium	0.003	mg/L	0.002	SW6020	02/04/13 13:52	SLS	7440-62-2	
Zinc	0.065	mg/L	0.010	SW6020	02/04/13 13:52	SLS	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	02/04/13 13:59	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	85-68-7	

B-Compound also found in associated method blank

Lab Sample ID: S55359.01 (continued)
Sample Tag: MW-04-06(6)_01292013

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	120-83-2	
2,4-Dimethylphenol	2	ug/L	1	SW8270C	02/04/13 13:59	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	02/04/13 13:59	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	7	ug/L	1	SW8270C	02/04/13 13:59	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	95-48-7	
3-, 4-Methylphenol	4	ug/L	1	SW8270C	02/04/13 13:59	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	85-01-8	
Phenol	43	ug/L	1	SW8270C	02/04/13 13:59	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	02/04/13 13:59	PL	88-06-2	

Lab Sample ID: S55359.01 (continued)
Sample Tag: MW-04-06(6)_01292013

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	02/01/13 13:40	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	02/01/13 14:15	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	02/01/13 14:15	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	02/01/13 14:15	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	74-87-3	
Vinyl chloride	2	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-34-3	
cis-1,2-Dichloroethene	2	ug/L	1	SW8260B	02/01/13 14:15	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	02/01/13 14:15	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	02/01/13 14:15	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	10061-01-5	
Toluene	1	ug/L	1	SW8260B	02/01/13 14:15	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	02/01/13 14:15	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	120-82-1	

Lab Sample ID: S55359.01 (continued)
Sample Tag: MW-04-06(6)_01292013

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	02/01/13 14:15	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

79625

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr. ste 100
CITY: Brighton
STATE: MI ZIP CODE: 48116
PHONE NO.: 810. 225. 1940 FAX NO.:
P.O. NO.: B0064481.2012
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com
QUOTE NO.:
PROJECT NO./NAME: RACER Lansing Plant 6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Lance Rogers / Lance M Rogers

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOC + 1,4 dioxane (SIM)	SVOC	PCB	Metals (Total and Dissolved)
55359.01	1-29-13		MW-04-06_01292013	GW	4	1	2	1					X	X		X

NOTE: All samples are un filtered.

FD Brighton Cold story.

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Lance M Rogers ARCADIS ☒ Sampler DATE 1-29-13 TIME 2300
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE 1-31-13 TIME 1305
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE 1-31-13 TIME 1305

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE 1-31-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION: Tekeeba Feant DATE 1-31-13 TIME 1430

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 4.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Analytical Laboratory Report

Report ID: S55427.01(01)
Generated on 02/12/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

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Report produced by

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Report Summary

Lab Sample ID(s): S55427.01-S55427.02
Project: RACER/Lansing Plant 3
Collected Date: 02/08/2013
Submitted Date/Time: 02/08/2013 15:05
Sampled by: Dale Armen
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55427.01	MW-12-20_020813	Groundwater	02/08/2013 12:00
S55427.02	MW-12-21_020813	Groundwater	02/08/2013 14:00

Analytical Laboratory Report

Lab Sample ID: S55427.01
Sample Tag: MW-12-20_020813
Collected Date/Time: 02/08/2013 12:00
Matrix: Groundwater
COC Reference: 79647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
2	1L Amber	None	Yes	6.0	IR
2	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	02/11/13 22:39	EMR		
Mercury Digestion	Completed			SW7471A	02/11/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	02/11/13 11:30	CCM		
Metal Digestion	Completed			3015A	02/12/13 10:00	PER		
Metal Digestion	Completed			3015A	02/12/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	02/12/13 10:20	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 13:58	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	02/12/13 13:54	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 13:58	PER	7440-38-2	
Arsenic	0.002	mg/L	0.002	SW6020	02/12/13 13:54	PER	7440-38-2	
Barium, Dissolved	0.140	mg/L	0.010	SW6020	02/12/13 13:58	PER	7440-39-3	
Barium	0.140	mg/L	0.010	SW6020	02/12/13 13:54	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020	02/12/13 13:58	PER	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020	02/12/13 13:54	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.001	SW6020	02/12/13 13:58	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.001	SW6020	02/12/13 13:54	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	02/12/13 13:58	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	02/12/13 13:54	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	02/12/13 13:58	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	02/12/13 13:54	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 13:58	PER	7440-50-8	
Copper	Not detected	mg/L	0.002	SW6020	02/12/13 13:54	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 13:58	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	02/12/13 13:54	PER	7439-92-1	
Manganese, Dissolved	0.150	mg/L	0.010	SW6020	02/12/13 13:58	PER	7439-96-5	
Manganese	0.153	mg/L	0.010	SW6020	02/12/13 13:54	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	02/11/13 14:45	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	02/11/13 14:43	CCM	7439-97-6	
Nickel, Dissolved	0.045	mg/L	0.010	SW6020	02/12/13 13:58	PER	7440-02-0	
Nickel	0.047	mg/L	0.010	SW6020	02/12/13 13:54	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 13:58	PER	7782-49-2	
Selenium	Not detected	mg/L	0.002	SW6020	02/12/13 13:54	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	02/12/13 13:58	PER	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	02/12/13 13:54	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 13:58	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	02/12/13 13:54	PER	7440-62-2	
Zinc, Dissolved	0.012	mg/L	0.010	SW6020	02/12/13 13:58	PER	7440-66-6	
Zinc	0.013	mg/L	0.010	SW6020	02/12/13 13:54	PER	7440-66-6	

Lab Sample ID: S55427.01 (continued)
Sample Tag: MW-12-20_020813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	02/12/13 14:30	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	02/12/13 14:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	132-64-9	
Diethyl phthalate	31	ug/L	1	SW8270C	02/12/13 14:30	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	2	ug/L	1	SW8270C	02/12/13 14:30	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S55427.01 (continued)
Sample Tag: MW-12-20_020813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 14:30	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	02/11/13 13:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	02/11/13 14:20	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	02/11/13 14:20	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	02/11/13 14:20	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	02/11/13 14:20	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	02/11/13 14:20	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	108-87-2	

Lab Sample ID: S55427.01 (continued)
Sample Tag: MW-12-20_020813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	02/11/13 14:20	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	02/11/13 14:20	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S55427.02
Sample Tag: MW-12-21_020813
Collected Date/Time: 02/08/2013 14:00
Matrix: Groundwater
COC Reference: 79647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	6.0	IR
2	1L Amber	None	Yes	6.0	IR
2	125ml Plastic	HNO3	Yes	6.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	02/11/13 22:39	EMR		
Mercury Digestion	Completed			SW7471A	02/11/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	02/11/13 11:30	CCM		
Metal Digestion	Completed			3015A	02/12/13 10:00	PER		
Metal Digestion	Completed			3015A	02/12/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	02/12/13 10:20	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 14:06	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	02/12/13 14:03	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 14:06	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020	02/12/13 14:03	PER	7440-38-2	
Barium, Dissolved	0.060	mg/L	0.010	SW6020	02/12/13 14:06	PER	7440-39-3	
Barium	0.061	mg/L	0.010	SW6020	02/12/13 14:03	PER	7440-39-3	
Boron, Dissolved	0.27	mg/L	0.04	SW6020	02/12/13 14:06	PER	7440-42-8	
Boron	0.26	mg/L	0.04	SW6020	02/12/13 14:03	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.001	SW6020	02/12/13 14:06	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.001	SW6020	02/12/13 14:03	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.010	SW6020	02/12/13 14:06	PER	7440-47-3	
Chromium	Not detected	mg/L	0.010	SW6020	02/12/13 14:03	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	02/12/13 14:06	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	02/12/13 14:03	PER	7440-48-4	
Copper, Dissolved	0.002	mg/L	0.002	SW6020	02/12/13 14:06	PER	7440-50-8	
Copper	0.002	mg/L	0.002	SW6020	02/12/13 14:03	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 14:06	PER	7439-92-1	
Lead	Not detected	mg/L	0.002	SW6020	02/12/13 14:03	PER	7439-92-1	
Manganese, Dissolved	0.303	mg/L	0.010	SW6020	02/12/13 14:06	PER	7439-96-5	
Manganese	0.307	mg/L	0.010	SW6020	02/12/13 14:03	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	02/11/13 14:49	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	02/11/13 14:47	CCM	7439-97-6	
Nickel, Dissolved	0.042	mg/L	0.010	SW6020	02/12/13 14:06	PER	7440-02-0	
Nickel	0.041	mg/L	0.010	SW6020	02/12/13 14:03	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 14:06	PER	7782-49-2	
Selenium	Not detected	mg/L	0.002	SW6020	02/12/13 14:03	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	02/12/13 14:06	PER	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	02/12/13 14:03	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	02/12/13 14:06	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	02/12/13 14:03	PER	7440-62-2	
Zinc, Dissolved	0.022	mg/L	0.010	SW6020	02/12/13 14:06	PER	7440-66-6	
Zinc	0.025	mg/L	0.010	SW6020	02/12/13 14:03	PER	7440-66-6	

Lab Sample ID: S55427.02 (continued)
Sample Tag: MW-12-21_020813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	101-55-3	
di-n-Butyl phthalate	1	ug/L	1	SW8270C	02/12/13 15:03	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	02/12/13 15:03	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	132-64-9	
Diethyl phthalate	8	ug/L	1	SW8270C	02/12/13 15:03	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S55427.02 (continued)
Sample Tag: MW-12-21_020813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	02/12/13 15:03	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	380	ug/L	50	SW8260B - SIM	02/11/13 14:07	WAT	123-91-1	Y
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	02/11/13 14:40	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	02/11/13 14:40	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	02/11/13 14:40	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	02/11/13 14:40	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	02/11/13 14:40	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-27-4	

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S55427.02 (continued)
Sample Tag: MW-12-21_020813

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	02/11/13 14:40	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	02/11/13 14:40	WAT	96-12-8	

Merit Laboratories, Inc.

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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

79647

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Patrick Curry
COMPANY: ARCADIS
ADDRESS: 10599 Citation Dr. Ste 600
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810-225-1926 FAX NO.: 810-229-8837 P.O. NO.: B00644480.2013.00603
E-MAIL ADDRESS: Patrick.Curry@arcadis-us.com QUOTE NO.: —

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Racer / Lansing / Plant 3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Dale Arnett

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☒ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	Metals (Field Filtered)	Metals	SVOCs						
55427.01	2/8/13	1200	MW-12-20_020813	GW	7	2	3	2					3	1	1	2						
.02	2/8/13	1400	MW-12-21_020813	GW	7	2	3	2					3	1	1	2						

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Dale Arnett ☒ Sampler DATE: 2/8/13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faust DATE: 2/8/13 TIME: 1505

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 6.0
Samples Rinsate not Iso
Green water due to Dye

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S55479.01(01)
Generated on 02/19/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S55479.01
Project: B0064480.2013.00603
Collected Date: 02/14/2013
Submitted Date/Time: 02/15/2013 08:00
Sampled by: Lance Rogers
P.O. #: B0064480.2013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55479.01	MW-12-21_021413	Groundwater	02/14/2013 15:50

Analytical Laboratory Report

Lab Sample ID: S55479.01
Sample Tag: MW-12-21_021413
Collected Date/Time: 02/14/2013 15:50
Matrix: Groundwater
COC Reference: 82747

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	02/18/13 11:16	WAT		
Organics - Volatiles								
1,4-Dioxane	460	ug/L	50	SW8260B - SIM	02/15/13 15:14	WAT	123-91-1	Y

Y-Elevated reporting limit due to high target concentration

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C.O.C. PAGE # 1 OF 1

82747

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: ARCADIS
ADDRESS: 10559 Citation Dr. Ste 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810.225.1440 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: randy.christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B0064480.2013.00603
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Lance Rogers / Lance M Rogers

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	1,4 Dioxane (SIM/S)									
55479.01	2-14-13	1550	MW-12-21_021413	GW	3		3						X									

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Lance M Rogers / ARCADIS ☑ Sampler DATE: 2-14-13 TIME: 1715
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Drop Box DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Andrew Bell DATE: 15FEB13 TIME: 0800

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL 5.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S55971.01(01)
Generated on 04/08/2013

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: Lansing Plants for Arcadis Group

Report produced by

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Report Summary

Lab Sample ID(s): S55971.01-S55971.02
Project: B0064480.2013.00106
Collected Date: 04/04/2013
Submitted Date/Time: 04/04/2013 15:30
Sampled by: C. Barton
P.O. #: B0064480.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S55971.01	MW-91-6	Water	04/04/2013 13:10
S55971.02	MW-13-26	Water	04/04/2013 13:55

Analytical Laboratory Report

Lab Sample ID: S55971.01
Sample Tag: MW-91-6
Collected Date/Time: 04/04/2013 13:10
Matrix: Water
COC Reference: 81213

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
2	125ml Plastic	HNO3	Yes	5.1	IR
1	1L Amber	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/04/13 16:56	PL		
Mercury Digestion	Completed			SW7471A	04/05/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	04/05/13 11:30	CCM		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/05/13 10:25	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:55	PER	7440-36-0	
Antimony	Not detected	mg/L	0.002	SW6020	04/06/13 12:53	PER	7440-36-0	
Arsenic, Dissolved	0.010	mg/L	0.002	SW6020	04/06/13 12:55	PER	7440-38-2	
Arsenic	0.011	mg/L	0.002	SW6020	04/06/13 12:53	PER	7440-38-2	
Barium, Dissolved	0.127	mg/L	0.010	SW6020	04/06/13 12:55	PER	7440-39-3	
Barium	0.129	mg/L	0.010	SW6020	04/06/13 12:53	PER	7440-39-3	
Boron, Dissolved	0.10	mg/L	0.04	SW6020	04/06/13 12:55	PER	7440-42-8	
Boron	0.10	mg/L	0.04	SW6020	04/06/13 12:53	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/06/13 12:55	PER	7440-43-9	
Cadmium	0.0023	mg/L	0.0010	SW6020	04/06/13 12:53	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	04/06/13 12:55	PER	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020	04/06/13 12:53	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/06/13 12:55	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.010	SW6020	04/06/13 12:53	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:55	PER	7440-50-8	
Copper	0.005	mg/L	0.002	SW6020	04/06/13 12:53	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:55	PER	7439-92-1	
Lead	0.006	mg/L	0.002	SW6020	04/06/13 12:53	PER	7439-92-1	
Manganese, Dissolved	0.142	mg/L	0.010	SW6020	04/06/13 12:55	PER	7439-96-5	
Manganese	0.145	mg/L	0.010	SW6020	04/06/13 12:53	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/05/13 16:07	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471A	04/05/13 16:05	CCM	7439-97-6	
Nickel, Dissolved	Not detected	mg/L	0.010	SW6020	04/06/13 12:55	PER	7440-02-0	
Nickel	Not detected	mg/L	0.010	SW6020	04/06/13 12:53	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:55	PER	7782-49-2	
Selenium	Not detected	mg/L	0.002	SW6020	04/06/13 12:53	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/06/13 12:55	PER	7440-22-4	
Silver	Not detected	mg/L	0.0002	SW6020	04/06/13 12:53	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:55	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.002	SW6020	04/06/13 12:53	PER	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.010	SW6020	04/06/13 12:55	PER	7440-66-6	
Zinc	0.087	mg/L	0.010	SW6020	04/06/13 12:53	PER	7440-66-6	

Lab Sample ID: S55971.01 (continued)
Sample Tag: MW-91-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics, Dissolved								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	2	SW8270C	04/05/13 16:27	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	7005-72-3	
Caprolactam	8	ug/L	1	SW8270C	04/05/13 16:27	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	2	SW8270C	04/05/13 16:27	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	2	SW8270C	04/05/13 16:27	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	2	SW8270C	04/05/13 16:27	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	88-75-5	

Lab Sample ID: S55971.01 (continued)
Sample Tag: MW-91-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics, Dissolved (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 16:27	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/04/13 16:03	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/04/13 16:53	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/04/13 16:53	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/04/13 16:53	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/04/13 16:53	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/04/13 16:53	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	10061-01-5	

Lab Sample ID: S55971.01 (continued)
Sample Tag: MW-91-6

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Toluene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/04/13 16:53	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/04/13 16:53	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S55971.02
Sample Tag: MW-13-26
Collected Date/Time: 04/04/2013 13:55
Matrix: Water
COC Reference: 81213

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
1	125ml Plastic	HNO3	Yes	5.1	IR
2	1L Amber	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			3510C	04/04/13 16:52	PL		
Mercury Digestion	Completed			SW7471A	04/05/13 11:30	CCM		
Mercury Digestion	Completed			SW7471A	04/05/13 11:30	CCM		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
Metal Digestion	Completed			3015A	04/06/13 10:00	PER		
pH check for VOCs	<2	STD Units		N/A	04/05/13 10:28	WAT		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:51	PER	7440-36-0	1
Antimony	Not detected	mg/L	0.002	SW6020	04/06/13 12:49	PER	7440-36-0	
Arsenic, Dissolved	0.002	mg/L	0.002	SW6020	04/06/13 12:51	PER	7440-38-2	1
Arsenic	0.013	mg/L	0.002	SW6020	04/06/13 12:49	PER	7440-38-2	
Barium, Dissolved	0.052	mg/L	0.010	SW6020	04/06/13 12:51	PER	7440-39-3	1
Barium	0.134	mg/L	0.010	SW6020	04/06/13 12:49	PER	7440-39-3	
Boron, Dissolved	0.18	mg/L	0.04	SW6020	04/06/13 12:51	PER	7440-42-8	1
Boron	0.19	mg/L	0.04	SW6020	04/06/13 12:49	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0010	SW6020	04/06/13 12:51	PER	7440-43-9	1
Cadmium	Not detected	mg/L	0.0010	SW6020	04/06/13 12:49	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020	04/06/13 12:51	PER	7440-47-3	1
Chromium	0.026	mg/L	0.005	SW6020	04/06/13 12:49	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.010	SW6020	04/06/13 12:51	PER	7440-48-4	1
Cobalt	0.023	mg/L	0.010	SW6020	04/06/13 12:49	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:51	PER	7440-50-8	1
Copper	0.006	mg/L	0.002	SW6020	04/06/13 12:49	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:51	PER	7439-92-1	1
Lead	Not detected	mg/L	0.002	SW6020	04/06/13 12:49	PER	7439-92-1	
Manganese, Dissolved	0.741	mg/L	0.010	SW6020	04/06/13 12:51	PER	7439-96-5	1
Manganese	4.68	mg/L	0.010	SW6020	04/06/13 12:49	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471A	04/05/13 16:11	CCM	7439-97-6	1
Mercury	0.0005	mg/L	0.0001	SW7471A	04/05/13 16:09	CCM	7439-97-6	
Nickel, Dissolved	0.049	mg/L	0.010	SW6020	04/06/13 12:51	PER	7440-02-0	1
Nickel	0.148	mg/L	0.010	SW6020	04/06/13 12:49	PER	7440-02-0	
Selenium, Dissolved	0.003	mg/L	0.002	SW6020	04/06/13 12:51	PER	7782-49-2	1
Selenium	0.003	mg/L	0.002	SW6020	04/06/13 12:49	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0002	SW6020	04/06/13 12:51	PER	7440-22-4	1
Silver	Not detected	mg/L	0.0002	SW6020	04/06/13 12:49	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.002	SW6020	04/06/13 12:51	PER	7440-62-2	1
Vanadium	0.005	mg/L	0.002	SW6020	04/06/13 12:49	PER	7440-62-2	
Zinc, Dissolved	0.117	mg/L	0.010	SW6020	04/06/13 12:51	PER	7440-66-6	1
Zinc	3.26	mg/L	0.010	SW6020	04/06/13 12:49	PER	7440-66-6	

1-*Filtered in lab

Lab Sample ID: S55971.02 (continued)
Sample Tag: MW-13-26

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	101-55-3	
di-n-Butyl phthalate	3	ug/L	1	SW8270C	04/05/13 17:00	PL	84-74-2	B
Benzaldehyde	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	7005-72-3	
Caprolactam	3	ug/L	1	SW8270C	04/05/13 17:00	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270C	04/05/13 17:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	132-64-9	
Diethyl phthalate	1	ug/L	1	SW8270C	04/05/13 17:00	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	88-74-4	

B-Compound also found in associated method blank

Lab Sample ID: S55971.02 (continued)
Sample Tag: MW-13-26

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270C	04/05/13 17:00	PL	88-06-2	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	04/04/13 16:25	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260B	04/04/13 17:14	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260B	04/04/13 17:14	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260B	04/04/13 17:14	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260B	04/04/13 17:14	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260B	04/04/13 17:14	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	108-87-2	

Lab Sample ID: S55971.02 (continued)
Sample Tag: MW-13-26

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260B	04/04/13 17:14	WAT		
o-Xylene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260B	04/04/13 17:14	WAT	96-12-8	

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

81213

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr. Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810. 225.1940 FAX NO.: 810. 229.8940 P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: B006480.2013.00106
SAMPLER(S) - PLEASE PRINT/SIGN NAME: C. Barton

TURNAROUND TIME REQUIRED ☐ 1 DAY ☒ 2 DAYS ☐ 3 DAYS ☐ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☐ New York
☐ Other

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs + 1,4 Dioxane (8260 SIMS)	SVOCs	Dissolved Metals	Total Metals	Special Instructions
559971.01	4-4-13	1310	MW-91-6	W	6	1	3	2					✓	✓	✓	✓	SVOCs & dissolved metals field filtered.
.02	4-4-13	1355	MW-13-26	W	6	2	3	1					✓	✓	✓	✓	* SVOCs & dissolved metals must be LAB FILTERED

RELINQUISHED BY: SIGNATURE/ORGANIZATION: C. Barton ☒ Sampler DATE: 4-4-13 TIME: 1510
RECEIVED BY: SIGNATURE/ORGANIZATION: Arcadis MSD DATE: 4-4-13 TIME: 1510
RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Arcadis MSD DATE: 4-4-13 TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: Tabatha Faunt DATE: 4-4-13 TIME: 1530
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Supplemental Report

Report ID: S59437.01(02)
Generated on 01/30/2014
Replaces report S59437.01(01) generated on 01/08/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59437.01-S59437.04
Project: Plant 2
Collected Date: 12/13/2013
Submitted Date/Time: 12/16/2013 09:20
Sampled by: Cliff Walls
P.O. #: NA

Additional analyses added per client request.

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59437.01	Trip Blank	Groundwater	12/13/2013 07:00
S59437.02	MW-13-45 (12-13-13)	Groundwater	12/13/2013 10:50
S59437.03	MW-13-44 (12-13-13)	Groundwater	12/13/2013 13:00
S59437.04	MW-13-43 (12-13-13)	Groundwater	12/13/2013 15:00

Lab Sample ID: S59437.01
Sample Tag: Trip Blank
Collected Date/Time: 12/13/2013 07:00
Matrix: Groundwater
COC Reference: 78502

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/16/13 14:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/16/13 16:36	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 15:23	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 15:23	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 15:23	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 15:23	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 15:23	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	79-34-5	

Lab Sample ID: S59437.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 15:23	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 15:23	WAT	96-12-8	

Lab Sample ID: S59437.02
Sample Tag: MW-13-45 (12-13-13)
Collected Date/Time: 12/13/2013 10:50
Matrix: Groundwater
COC Reference: 78502

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/18/13 10:25	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/16/13 14:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7440-36-0	
Arsenic	0.005	mg/L	0.002	SW6020A	12/30/13 13:07	PER	7440-38-2	
Barium	0.354	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	12/30/13 13:07	PER	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:07	PER	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7440-48-4	
Copper	0.005	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 13:07	PER	7439-92-1	
Manganese	0.059	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/18/13 15:23	CCM	7439-97-6	
Nickel	0.013	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:07	PER	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 13:07	PER	7440-62-2	
Zinc	0.008	mg/L	0.005	SW6020A	12/30/13 13:07	PER	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	91-58-7	

Lab Sample ID: S59437.02 (continued)
Sample Tag: MW-13-45 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/20/13 16:25	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/20/13 16:25	PL	118-74-1	

Lab Sample ID: S59437.02 (continued)
Sample Tag: MW-13-45 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	25	ug/L	5	SW8260B - SIM	12/16/13 16:54	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 15:45	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 15:45	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 15:45	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 15:45	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 15:45	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 15:45	WAT		
o-Xylene	1	ug/L	1	SW8260C	12/17/13 15:45	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	120-82-1	

Lab Sample ID: S59437.02 (continued)
Sample Tag: MW-13-45 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 15:45	WAT	96-12-8	

Lab Sample ID: S59437.03
Sample Tag: MW-13-44 (12-13-13)
Collected Date/Time: 12/13/2013 13:00
Matrix: Groundwater
COC Reference: 78502

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
2	125ml Plastic	HNO3	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/18/13 10:25	CCM		
Mercury Digestion	Completed			SW7471B	12/18/13 10:25	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/16/13 14:00	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7440-36-0	
Arsenic, Dissolved	Not detected	mg/L	0.002	SW6020A	12/30/13 13:13	PER	7440-38-2	
Arsenic	Not detected	mg/L	0.002	SW6020A	12/30/13 13:09	PER	7440-38-2	
Barium, Dissolved	0.098	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7440-39-3	
Barium	0.111	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7440-39-3	
Boron, Dissolved	0.07	mg/L	0.04	SW6020A	12/30/13 13:13	PER	7440-42-8	
Boron	0.08	mg/L	0.04	SW6020A	12/30/13 13:09	PER	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:13	PER	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:09	PER	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7440-47-3	
Chromium	0.008	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7440-50-8	
Copper	0.010	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	12/30/13 13:13	PER	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	12/30/13 13:09	PER	7439-92-1	
Manganese, Dissolved	0.188	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7439-96-5	
Manganese	0.249	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/18/13 15:27	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/18/13 15:25	CCM	7439-97-6	
Nickel, Dissolved	0.011	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7440-02-0	
Nickel	0.014	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:13	PER	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	12/30/13 13:09	PER	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	12/30/13 13:13	PER	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	12/30/13 13:09	PER	7440-62-2	
Zinc, Dissolved	0.006	mg/L	0.005	SW6020A	12/30/13 13:13	PER	7440-66-6	
Zinc	0.068	mg/L	0.005	SW6020A	12/30/13 13:09	PER	7440-66-6	

Lab Sample ID: S59437.03 (continued)
Sample Tag: MW-13-44 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/20/13 17:00	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	12/20/13 17:00	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	88-75-5	

Lab Sample ID: S59437.03 (continued)
Sample Tag: MW-13-44 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/20/13 17:00	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/16/13 17:12	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 16:07	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 16:07	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 16:07	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 16:07	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 16:07	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	108-87-2	

Lab Sample ID: S59437.03 (continued)
Sample Tag: MW-13-44 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 16:07	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 16:07	WAT	96-12-8	

Lab Sample ID: S59437.04
Sample Tag: MW-13-43 (12-13-13)
Collected Date/Time: 12/13/2013 15:00
Matrix: Groundwater
COC Reference: 78502

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.8	IR
2	1L Amber	None	Yes	4.8	IR
1	125ml Plastic	HNO3	Yes	4.8	IR
1	1L Plastic	None	Yes	4.8	IR
2	40ml Glass	H2SO4	Yes	4.8	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/19/13 14:00	EMR		
Mercury Digestion	Completed			SW7471B	12/19/13 10:45	CCM		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
Metal Digestion	Completed			SW3015A	12/30/13 09:00	JRH		
pH check for VOCs	<2	STD Units		N/A	12/16/13 14:20	LBR		
Inorganics								
Alkalinity as CaCO3	431	mg/L	1	SM2320B	12/17/13 14:20	JKB		
Bicarbonate Alkalinity	431	mg/L	1	SM2320B	12/17/13 14:20	JKB		
Bromide	Not detected	mg/L	2.5	E300.0	12/18/13 06:32	JDP	24959-67-9	
Bromide (Replicate 01)	Not detected	mg/L	1	E300.0	01/30/14 07:10	JDP	24959-67-9	F
Chloride	316	mg/L	50	E300.0	12/18/13 07:49	JDP	16887-00-6	
Hardness as CaCO3	384	mg/L		SM2340B	01/08/14 16:28	JRH		
Sulfate	66	mg/L	5	E300.0	12/18/13 06:32	JDP	14808-79-8	
TOC	6.5	mg/L	1	SM 5310C	12/30/13 14:53	JKB		
Total Dissolved Solids	1,104	mg/L	1	SM2540C	12/18/13 20:45	ASB		
Total Suspended Solids	7	mg/L	1	SM2540D	12/16/13 19:15	ASB		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7440-36-0	
Arsenic	0.003	mg/L	0.002	SW6020A	01/08/14 13:58	JRH	7440-38-2	
Barium	0.516	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7440-39-3	
Boron	0.11	mg/L	0.04	SW6020A	01/08/14 13:58	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	01/08/14 13:58	JRH	7440-43-9	
Calcium	154	mg/L	1.0	SW6020A	01/08/14 16:28	JRH	7440-70-2	
Chromium	Not detected	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7440-50-8	
Iron, Dissolved	1.14	mg/L	0.02	SW6020A	01/08/14 14:03	JRH	7439-89-6	
Iron	3.26	mg/L	0.02	SW6020A	01/08/14 13:58	JRH	7439-89-6	
Lead	Not detected	mg/L	0.003	SW6020A	01/08/14 13:58	JRH	7439-92-1	
Magnesium	58.6	mg/L	0.5	SW6020A	01/08/14 16:28	JRH	7439-95-4	
Manganese, Dissolved	0.098	mg/L	0.005	SW6020A	01/08/14 14:03	JRH	7439-96-5	
Manganese	0.045	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/19/13 15:00	CCM	7439-97-6	
Nickel	0.014	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7440-02-0	
Potassium	2.75	mg/L	0.5	SW6020A	01/08/14 16:28	JRH	7440-09-7	
Selenium	Not detected	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7782-49-2	

F-Analysis run outside of holding time

Lab Sample ID: S59437.04 (continued)
Sample Tag: MW-13-43 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Silver	Not detected	mg/L	0.0005	SW6020A	01/08/14 13:58	JRH	7440-22-4	
Sodium	148	mg/L	1.0	SW6020A	01/08/14 16:28	JRH	7440-23-5	
Vanadium	Not detected	mg/L	0.004	SW6020A	01/08/14 13:58	JRH	7440-62-2	
Zinc	Not detected	mg/L	0.005	SW6020A	01/08/14 13:58	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/20/13 17:34	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	193-39-5	

Lab Sample ID: S59437.04 (continued)
Sample Tag: MW-13-43 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
Isophorone	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/20/13 17:34	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	220	ug/L	30	SW8260B - SIM	12/17/13 14:13	WAT	123-91-1	Y
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/17/13 16:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/17/13 16:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/17/13 16:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/17/13 16:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/17/13 16:29	WAT	591-78-6	

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S59437.04 (continued)
Sample Tag: MW-13-43 (12-13-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/17/13 16:29	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/17/13 16:29	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

78502

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Chastensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: ~~Brighton~~ Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 225 1990 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Chastensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 2
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wallis

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOC 01 14 5pm	5100	Water Quality Parameters	TAL Metals	Diss TAL Metals
59437.01	12-13	7:00	Trip Blank	GW	1		1						X				
.02	12-13	10:50	MW-13-45 (12-13-13)	GW	6	2	3	1					X	X		X	
.03	12-13	13:00	MW-13-44 (12-13-13)	GW	7	2	3	2					X	X		X	X
.04	12-13	15:00	MW-13-43 (12-13-13)	GW	7	3	3	1					X	X	X	X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☒ Sampler	DATE 12-13-13	TIME 17:00
RECEIVED BY: SIGNATURE/ORGANIZATION	ARCADIS Stevens	DATE 12-13-13	TIME 17:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION	ARCADIS Signature	DATE 12	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Mca	DATE 12-16-13	TIME 845

RELINQUISHED BY: SIGNATURE/ORGANIZATION	MCA	DATE 12-16-13	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	Kevin George	DATE 12/16/13	TIME 970
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 4.8
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59540.01(01)
Generated on 01/08/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59540.01-S59540.02
Project: Plant 6
Collected Date: 12/20/2013
Submitted Date/Time: 12/27/2013 10:00
Sampled by: Cliff Walls
P.O. #: B0064481.2013.00603

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59540.01	Trip Blank	Groundwater	12/20/2013 07:00
S59540.02	MW-13-52 (12-20-13)	Groundwater	12/20/2013 13:35

Analytical Laboratory Report

Lab Sample ID: S59540.01
Sample Tag: Trip Blank
Collected Date/Time: 12/20/2013 07:00
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/31/13 12:50	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/31/13 16:05	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/28/13 19:35	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/28/13 19:35	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/28/13 19:35	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/28/13 19:35	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/28/13 19:35	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	79-34-5	

Lab Sample ID: S59540.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/28/13 19:35	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/28/13 19:35	JGH	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59540.02
Sample Tag: MW-13-52 (12-20-13)
Collected Date/Time: 12/20/2013 13:35
Matrix: Groundwater
COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	1L Plastic	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR
3	40ml Glass	H2SO4	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/30/13 12:14	EMR		F
Mercury Digestion	Completed			SW7471B	12/31/13 13:30	CCM		
Mercury Digestion	Completed			SW7471B	12/31/13 13:30	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
pH check for VOCs	<2	STD Units		N/A	12/31/13 13:15	LBR		
Inorganics								
Alkalinity as CaCO3	409	mg/L	1	SM2320B	12/30/13 12:50	JKB		
Bicarbonate Alkalinity	409	mg/L	1	SM2320B	12/30/13 12:50	JKB		
Bromide	Not detected	mg/L	2.5	E300.0	12/31/13 13:40	JDP		
Chloride	111	mg/L	10	E300.0	12/31/13 16:55	JDP	16887-00-6	
Hardness as CaCO3	417	mg/L		SM2340B	01/08/14 16:41	JRH		
Sulfate	45	mg/L	5	E300.0	12/31/13 13:40	JDP	14808-79-8	
TOC	5.4	mg/L	1	SM 5310C	12/30/13 17:33	JKB		
Total Dissolved Solids	686	mg/L	1	SM2540C	12/27/13 17:20	WAR		
Total Suspended Solids	25	mg/L	1	SM2540D	12/27/13 21:10	ASB		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7440-36-0	
Arsenic, Dissolved	0.005	mg/L	0.002	SW6020A	01/08/14 15:06	JRH	7440-38-2	
Arsenic	0.005	mg/L	0.002	SW6020A	01/08/14 15:04	JRH	7440-38-2	
Barium, Dissolved	0.241	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7440-39-3	
Barium	0.286	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7440-39-3	
Boron, Dissolved	0.05	mg/L	0.04	SW6020A	01/08/14 15:06	JRH	7440-42-8	
Boron	0.06	mg/L	0.04	SW6020A	01/08/14 15:04	JRH	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	01/08/14 15:06	JRH	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	01/08/14 15:04	JRH	7440-43-9	
Calcium, Dissolved	161	mg/L	1.0	SW6020A	01/08/14 16:41	JRH	7440-70-2	
Calcium	167	mg/L	1.0	SW6020A	01/08/14 16:40	JRH	7440-70-2	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7440-50-8	
Iron, Dissolved	9.09	mg/L	0.02	SW6020A	01/08/14 15:06	JRH	7439-89-6	

F-Analysis run outside of holding time

Lab Sample ID: S59540.02 (continued)
Sample Tag: MW-13-52 (12-20-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Iron	10.7	mg/L	0.02	SW6020A	01/08/14 15:04	JRH	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	01/08/14 15:06	JRH	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	01/08/14 15:04	JRH	7439-92-1	
Magnesium, Dissolved	53.4	mg/L	0.5	SW6020A	01/08/14 16:41	JRH	7439-95-4	
Magnesium	55.8	mg/L	0.5	SW6020A	01/08/14 16:40	JRH	7439-95-4	
Manganese, Dissolved	0.125	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7439-96-5	
Manganese	0.168	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/31/13 17:25	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/31/13 17:05	CCM	7439-97-6	
Nickel, Dissolved	0.007	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7440-02-0	
Nickel	0.009	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7440-02-0	
Potassium, Dissolved	3.61	mg/L	0.5	SW6020A	01/08/14 16:41	JRH	7440-09-7	
Potassium	4.77	mg/L	0.5	SW6020A	01/08/14 16:40	JRH	7440-09-7	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	01/08/14 15:06	JRH	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	01/08/14 15:04	JRH	7440-22-4	
Sodium, Dissolved	11.3	mg/L	1.0	SW6020A	01/08/14 16:41	JRH	7440-23-5	
Sodium	12.5	mg/L	1.0	SW6020A	01/08/14 16:40	JRH	7440-23-5	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	01/08/14 15:06	JRH	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	01/08/14 15:04	JRH	7440-62-2	
Zinc, Dissolved	0.007	mg/L	0.005	SW6020A	01/08/14 15:06	JRH	7440-66-6	
Zinc	0.015	mg/L	0.005	SW6020A	01/08/14 15:04	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	83-32-9	G
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	208-96-8	G
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	98-86-2	G
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	120-12-7	G
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	1912-24-9	G
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	92-52-4	G
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	101-55-3	G
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	84-74-2	G
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	100-52-7	G
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	56-55-3	G
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	50-32-8	G
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	205-99-2	G
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	191-24-2	G
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	207-08-9	G
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	85-68-7	G
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	91-58-7	G
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	95-57-8	G
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	59-50-7	G
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	106-47-8	G
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	7005-72-3	G
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	105-60-2	G
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	86-74-8	G
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	111-91-1	G

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S59540.02 (continued)
Sample Tag: MW-13-52 (12-20-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	111-44-4	G
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	108-60-1	G
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	218-01-9	G
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	120-83-2	G
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	105-67-9	G
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	51-28-5	G
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	121-14-2	G
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	606-20-2	G
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	534-52-1	G
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 16:55	PL	53-70-3	G
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	132-64-9	G
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	84-66-2	G
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	131-11-3	G
bis(2-Ethylhexyl)phthalate	1	ug/L	1	SW8270D	12/30/13 16:55	PL	117-81-7	G
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	206-44-0	G
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	86-73-7	G
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	87-68-3	G
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	77-47-4	G
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	67-72-1	G
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	193-39-5	G
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	78-59-1	G
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	91-57-6	G
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	95-48-7	G
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	3/4-Cresol	G
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	88-74-4	G
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	88-75-5	G
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	99-09-2	G
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	100-01-6	G
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	100-02-7	G
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	621-64-7	G
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	86-30-6	G
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	91-20-3	G
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	98-95-3	G
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	117-84-0	G
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	87-86-5	G
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	85-01-8	G
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	108-95-2	G
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	129-00-0	G
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	95-95-4	G
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	88-06-2	G
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 16:55	PL	118-74-1	G
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/31/13 16:23	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/30/13 15:47	WAT	67-64-1	

G-Estimated result due to extraction run outside of holding time

Lab Sample ID: S59540.02 (continued)
Sample Tag: MW-13-52 (12-20-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/30/13 15:47	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/30/13 15:47	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/30/13 15:47	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/30/13 15:47	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/30/13 15:47	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/30/13 15:47	WAT	96-12-8	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
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C.O.C. PAGE # 1 OF 1

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Anchors
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 225 1949 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@anchors-us.com QUOTE NO.:

INVOICE TO

☐ SAME
CONTACT NAME:
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 6
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Clif Clouse

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	TCL VOCs all 1-9 105	TAL Metals	Miss TAL Metals	SVOCs	VOA	Miss VOA	
59540.01	12/20	7:00	Trip Blank	GW	1								x							
.02	12/20	13:35	MW-13-52 (12-20-13)	GW	12	4	3	2	3				x	x	x	x	x	x		

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE 12-20-13	TIME 18:00	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 12-20-13	TIME 18:00	
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME	

RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME	
RECEIVED BY: SIGNATURE/ORGANIZATION	Paul Ball	DATE 12/23/13	TIME 13:00	

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S59495.01(01)
Generated on 01/08/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59495.01-S59495.03
Project: Plant 3
Collected Date: 12/18/2013
Submitted Date/Time: 12/19/2013 11:00
Sampled by: Cliff Walls
P.O. #: B0064480.2013.00106

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59495.01	Trip Blank	Groundwater	12/18/2013 07:00
S59495.02	MW-13-22 (12-18-13)	Groundwater	12/18/2013 10:05
S59495.03	MW-13-29 (12-18-13)	Groundwater	12/18/2013 11:35

Analytical Laboratory Report

Lab Sample ID: S59495.01
Sample Tag: Trip Blank
Collected Date/Time: 12/18/2013 07:00
Matrix: Groundwater
COC Reference: 78503

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/20/13 10:30	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 19:02	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/19/13 18:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/19/13 18:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/19/13 18:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/19/13 18:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/19/13 18:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	79-34-5	

Lab Sample ID: S59495.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/19/13 18:49	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/19/13 18:49	WAT	96-12-8	

Analytical Laboratory Report

Lab Sample ID: S59495.02
Sample Tag: MW-13-22 (12-18-13)
Collected Date/Time: 12/18/2013 10:05
Matrix: Groundwater
COC Reference: 78503

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	H2SO4	Yes	5.6	IR
1	1L Plastic	None	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Inorganics								
Alkalinity as CaCO3	422	mg/L	1	SM2320B	12/30/13 12:20	JKB		
Bicarbonate Alkalinity	422	mg/L	1	SM2320B	12/30/13 12:20	JKB		
Bromide	Not detected	mg/L	2.5	E300.0	12/31/13 12:42	JDP		
Chloride	31	mg/L	5	E300.0	12/31/13 12:42	JDP	16887-00-6	
Hardness as CaCO3	704	mg/L		SM2340B	01/08/14 16:31	JRH		
Sulfate	548	mg/L	100	E300.0	12/31/13 15:21	JDP	14808-79-8	
TOC	4.3	mg/L	1	SM 5310C	12/30/13 15:52	JKB		
Total Dissolved Solids	1,352	mg/L	1	SM2540C	12/27/13 17:20	WAR		F
Total Suspended Solids	39	mg/L	1	SM2540D	12/27/13 21:10	ASB		F
Metals								
Calcium	281	mg/L	1.0	SW6020A	01/08/14 16:31	JRH	7440-70-2	
Iron, Dissolved	0.83	mg/L	0.02	SW6020A	01/08/14 14:07	JRH	7439-89-6	
Iron	15.2	mg/L	0.02	SW6020A	01/08/14 14:05	JRH	7439-89-6	
Magnesium	93.1	mg/L	0.5	SW6020A	01/08/14 16:31	JRH	7439-95-4	
Manganese, Dissolved	0.069	mg/L	0.005	SW6020A	01/08/14 14:07	JRH	7439-96-5	
Manganese	0.074	mg/L	0.005	SW6020A	01/08/14 14:05	JRH	7439-96-5	
Potassium	2.54	mg/L	0.5	SW6020A	01/08/14 16:31	JRH	7440-09-7	
Sodium	22.1	mg/L	1.0	SW6020A	01/08/14 16:31	JRH	7440-23-5	

F-Analysis run outside of holding time

Analytical Laboratory Report

Lab Sample ID: S59495.03
Sample Tag: MW-13-29 (12-18-13)
Collected Date/Time: 12/18/2013 11:35
Matrix: Groundwater
COC Reference: 78503

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	H2SO4	Yes	5.6	IR
1	1L Plastic	None	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Inorganics								
Alkalinity as CaCO3	429	mg/L	1	SM2320B	12/30/13 12:30	JKB		
Bicarbonate Alkalinity	429	mg/L	1	SM2320B	12/30/13 12:30	JKB		
Bromide	Not detected	mg/L	2.5	E300.0	12/31/13 13:05	JDP		
Chloride	31	mg/L	5	E300.0	12/31/13 13:05	JDP	16887-00-6	
Hardness as CaCO3	1,481	mg/L		SM2340B	01/08/14 16:32	JRH		
Sulfate	3,860	mg/L	500	E300.0	12/31/13 16:21	JDP	14808-79-8	
TOC	5.8	mg/L	1	SM 5310C	12/30/13 16:33	JKB		
Total Dissolved Solids	2,580	mg/L	1	SM2540C	12/27/13 17:20	WAR		F
Total Suspended Solids	10	mg/L	1	SM2540D	12/27/13 21:10	ASB		F
Metals								
Calcium	593	mg/L	1.0	SW6020A	01/08/14 16:32	JRH	7440-70-2	
Iron, Dissolved	1.87	mg/L	0.02	SW6020A	01/08/14 14:11	JRH	7439-89-6	
Iron	7.37	mg/L	0.02	SW6020A	01/08/14 14:09	JRH	7439-89-6	
Magnesium	117	mg/L	0.5	SW6020A	01/08/14 16:32	JRH	7439-95-4	
Manganese, Dissolved	0.809	mg/L	0.005	SW6020A	01/08/14 14:11	JRH	7439-96-5	
Manganese	0.841	mg/L	0.005	SW6020A	01/08/14 14:09	JRH	7439-96-5	
Potassium	15.4	mg/L	0.5	SW6020A	01/08/14 16:32	JRH	7440-09-7	
Sodium	42.9	mg/L	1.0	SW6020A	01/08/14 16:32	JRH	7440-23-5	

F-Analysis run outside of holding time

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

78503

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Dr Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 229 1949 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@arcadis-us.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 3
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Cliff Wood

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER _____

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER _____

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES

Project Locations: ☐ Detroit ☐ New York ☐ Other _____

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	8260 TCL VOC with 1,4-dioxane	
59495.01	12.18	7:00	Trip Blank	GW	1			1					4	
.02	12.18	10:05	MW-13-22 (12.18.13)	GW	4	1			3				X	
.03	12.18	11:35	MW-13-29 (12.18.13)	GW	4	1			3				X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION	☐ Sampler	DATE	TIME
Cliff Wood		12-18-13	18:00
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Blue Storage		12.18.13	1800
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
Blue Storage			
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME
		12-19-13	10

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Kevin George	12-19-13	
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
Kevin George	12/19/13	1100

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.6

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Supplemental Report

Report ID: S59520.01(02)
Generated on 01/30/2014
Replaces report S59520.01(01) generated on 01/08/2014

Report to

Attention: Randy Christensen
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-225-1940 FAX: 810-229-8837
Email: Randy.Christensen@arcadis-us.com

Addtional Contacts: Danielle Olexa, Jeff Davin, Sarah Carman

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S59520.01-S59520.05
Project: Plant 3
Collected Date: 12/19/2013
Submitted Date/Time: 12/20/2013 11:10
Sampled by: Cliff Walls
P.O. #: B0064480.2013.00106

Additional analyses added per client request.

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:
Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002)
IN Drinking Water (#C-MI-07), NELAC NY (#11814), NCDENR (#680), NC Drinking Water (#26702)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S59520.01	Trip Blank	Groundwater	12/19/2013 07:00
S59520.02	MW-13-46 (12-19-13)	Groundwater	12/19/2013 09:15
S59520.03	MW-13-48 (12-19-13)	Groundwater	12/19/2013 12:00
S59520.04	MW-13-47 (12-19-13)	Groundwater	12/19/2013 14:30
S59520.05	MW-13-34 (12-19-13)	Groundwater	12/19/2013 16:15

Lab Sample ID: S59520.01
Sample Tag: Trip Blank
Collected Date/Time: 12/19/2013 07:00
Matrix: Groundwater
COC Reference: 75157

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	12/20/13 15:00	LBR		
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 16:01	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/20/13 15:27	JGH	67-64-1	
Carbon disulfide	1	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/20/13 15:27	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/20/13 15:27	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/20/13 15:27	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/20/13 15:27	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	79-34-5	

Lab Sample ID: S59520.01 (continued)
Sample Tag: Trip Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/20/13 15:27	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/20/13 15:27	JGH	96-12-8	

Lab Sample ID: S59520.02
Sample Tag: MW-13-46 (12-19-13)
Collected Date/Time: 12/19/2013 09:15
Matrix: Groundwater
COC Reference: 75157

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
1	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/20/13 15:51	EMR		
Mercury Digestion	Completed			SW7471B	12/27/13 10:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
pH check for VOCs	<2	STD Units		N/A	12/20/13 15:00	LBR		
Metals								
Antimony	Not detected	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7440-36-0	
Arsenic	Not detected	mg/L	0.002	SW6020A	01/08/14 14:13	JRH	7440-38-2	
Barium	0.085	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7440-39-3	
Boron	0.08	mg/L	0.04	SW6020A	01/08/14 14:13	JRH	7440-42-8	
Cadmium	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:13	JRH	7440-43-9	
Chromium	Not detected	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7440-47-3	
Cobalt	Not detected	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7440-48-4	
Copper	Not detected	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7440-50-8	
Lead	Not detected	mg/L	0.003	SW6020A	01/08/14 14:13	JRH	7439-92-1	
Manganese	0.419	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7439-96-5	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/27/13 15:08	CCM	7439-97-6	
Nickel	0.009	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7440-02-0	
Selenium	Not detected	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7782-49-2	
Silver	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:13	JRH	7440-22-4	
Vanadium	Not detected	mg/L	0.004	SW6020A	01/08/14 14:13	JRH	7440-62-2	
Zinc	0.017	mg/L	0.005	SW6020A	01/08/14 14:13	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	91-58-7	

Lab Sample ID: S59520.02 (continued)
Sample Tag: MW-13-46 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 20:20	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 20:20	PL	118-74-1	

Lab Sample ID: S59520.02 (continued)
Sample Tag: MW-13-46 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 19:20	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/20/13 15:47	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/20/13 15:47	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/20/13 15:47	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/20/13 15:47	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/20/13 15:47	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/20/13 15:47	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	120-82-1	

Lab Sample ID: S59520.02 (continued)
Sample Tag: MW-13-46 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/20/13 15:47	JGH	96-12-8	

Lab Sample ID: S59520.03
Sample Tag: MW-13-48 (12-19-13)
Collected Date/Time: 12/19/2013 12:00
Matrix: Groundwater
COC Reference: 75157

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR
3	40ml Glass	H2SO4	Yes	5.4	IR
2	1L Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/20/13 15:51	EMR		
Mercury Digestion	Completed			SW7471B	12/27/13 10:00	CCM		
Mercury Digestion	Completed			SW7471B	12/27/13 10:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
pH check for VOCs	<2	STD Units		N/A	12/20/13 15:00	LBR		
Inorganics								
Alkalinity as CaCO3	408	mg/L	1	SM2320B	12/30/13 12:40	JKB		
Bicarbonate Alkalinity	408	mg/L	1	SM2320B	12/30/13 12:40	JKB		
Bromide	Not detected	mg/L	2.5	E300.0	12/31/13 13:17	JDP	24959-67-9	
Bromide (Replicate 01)	Not detected	mg/L	1	E300.0	01/30/14 06:36	JDP	24959-67-9	F
Chloride	557	mg/L	50	E300.0	12/31/13 16:32	JDP	16887-00-6	
Hardness as CaCO3	677	mg/L		SM2340B	01/08/14 16:35	JRH		
Sulfate	181	mg/L	50	E300.0	12/31/13 16:32	JDP	14808-79-8	
TOC	13.4	mg/L	1	SM 5310C	12/30/13 16:53	JKB		
Total Dissolved Solids	1,620	mg/L	1	SM2540C	12/27/13 17:20	WAR		F
Total Suspended Solids	41	mg/L	1	SM2540D	12/27/13 20:30	ASB		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7440-36-0	
Arsenic, Dissolved	0.004	mg/L	0.002	SW6020A	01/08/14 14:20	JRH	7440-38-2	
Arsenic	0.007	mg/L	0.002	SW6020A	01/08/14 14:15	JRH	7440-38-2	
Barium, Dissolved	0.580	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7440-39-3	
Barium	0.581	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7440-39-3	
Boron, Dissolved	0.11	mg/L	0.04	SW6020A	01/08/14 14:20	JRH	7440-42-8	
Boron	0.12	mg/L	0.04	SW6020A	01/08/14 14:15	JRH	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:20	JRH	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:15	JRH	7440-43-9	
Calcium, Dissolved	265	mg/L	1.0	SW6020A	01/08/14 16:35	JRH	7440-70-2	
Calcium	271	mg/L	1.0	SW6020A	01/08/14 16:35	JRH	7440-70-2	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7440-50-8	
Copper	0.011	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7440-50-8	

F-Analysis run outside of holding time

Lab Sample ID: S59520.03 (continued)
Sample Tag: MW-13-48 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Metals (continued)								
Iron, Dissolved	20.1	mg/L	0.02	SW6020A	01/08/14 14:20	JRH	7439-89-6	
Iron	20.3	mg/L	0.02	SW6020A	01/08/14 14:15	JRH	7439-89-6	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	01/08/14 14:20	JRH	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	01/08/14 14:15	JRH	7439-92-1	
Magnesium, Dissolved	61.5	mg/L	0.5	SW6020A	01/08/14 16:35	JRH	7439-95-4	
Magnesium	62.5	mg/L	0.5	SW6020A	01/08/14 16:35	JRH	7439-95-4	
Manganese, Dissolved	0.342	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7439-96-5	
Manganese	0.352	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/27/13 15:13	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/27/13 15:10	CCM	7439-97-6	
Nickel, Dissolved	0.009	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7440-02-0	
Nickel	0.008	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7440-02-0	
Potassium, Dissolved	3.75	mg/L	0.5	SW6020A	01/08/14 16:35	JRH	7440-09-7	
Potassium	3.76	mg/L	0.5	SW6020A	01/08/14 16:35	JRH	7440-09-7	
Selenium, Dissolved	0.009	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:20	JRH	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:15	JRH	7440-22-4	
Sodium, Dissolved	256	mg/L	1.0	SW6020A	01/08/14 16:35	JRH	7440-23-5	
Sodium	258	mg/L	1.0	SW6020A	01/08/14 16:35	JRH	7440-23-5	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	01/08/14 14:20	JRH	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	01/08/14 14:15	JRH	7440-62-2	
Zinc, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:20	JRH	7440-66-6	
Zinc	0.006	mg/L	0.005	SW6020A	01/08/14 14:15	JRH	7440-66-6	
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	111-91-1	

Lab Sample ID: S59520.03 (continued)
Sample Tag: MW-13-48 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 20:55	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	88-75-5	
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 20:55	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	34	ug/L	5	SW8260B - SIM	12/20/13 19:38	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/20/13 16:07	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-15-0	

Lab Sample ID: S59520.03 (continued)
Sample Tag: MW-13-48 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/20/13 16:07	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/20/13 16:07	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/20/13 16:07	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/20/13 16:07	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/20/13 16:07	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/20/13 16:07	JGH	96-12-8	

Lab Sample ID: S59520.04
Sample Tag: MW-13-47 (12-19-13)
Collected Date/Time: 12/19/2013 14:30
Matrix: Groundwater
COC Reference: 75157

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.4	IR
2	1L Amber	None	Yes	5.4	IR
2	125ml Plastic	HNO3	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
BNA Extraction	Completed			SW3510C	12/20/13 15:51	EMR		
Mercury Digestion	Completed			SW7471B	12/27/13 10:00	CCM		
Mercury Digestion	Completed			SW7471B	12/27/13 10:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
pH check for VOCs	<2	STD Units		N/A	12/20/13 15:30	LBR		
Metals								
Antimony, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7440-36-0	
Antimony	Not detected	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7440-36-0	
Arsenic, Dissolved	0.011	mg/L	0.002	SW6020A	01/08/14 14:29	JRH	7440-38-2	
Arsenic	0.012	mg/L	0.002	SW6020A	01/08/14 14:57	JRH	7440-38-2	
Barium, Dissolved	0.123	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7440-39-3	
Barium	0.109	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7440-39-3	
Boron, Dissolved	0.12	mg/L	0.04	SW6020A	01/08/14 14:29	JRH	7440-42-8	
Boron	0.11	mg/L	0.04	SW6020A	01/08/14 14:57	JRH	7440-42-8	
Cadmium, Dissolved	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:29	JRH	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:57	JRH	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7440-47-3	
Cobalt, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7440-48-4	
Cobalt	Not detected	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7440-48-4	
Copper, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	SW6020A	01/08/14 14:29	JRH	7439-92-1	
Lead	Not detected	mg/L	0.003	SW6020A	01/08/14 14:57	JRH	7439-92-1	
Manganese, Dissolved	0.215	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7439-96-5	
Manganese	0.370	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0001	SW7471B	12/27/13 15:17	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0001	SW7471B	12/27/13 15:15	CCM	7439-97-6	
Nickel, Dissolved	0.015	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7440-02-0	
Nickel	0.059	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7440-02-0	
Selenium, Dissolved	Not detected	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:29	JRH	7440-22-4	
Silver	Not detected	mg/L	0.0005	SW6020A	01/08/14 14:57	JRH	7440-22-4	
Vanadium, Dissolved	Not detected	mg/L	0.004	SW6020A	01/08/14 14:29	JRH	7440-62-2	
Vanadium	Not detected	mg/L	0.004	SW6020A	01/08/14 14:57	JRH	7440-62-2	
Zinc, Dissolved	0.029	mg/L	0.005	SW6020A	01/08/14 14:29	JRH	7440-66-6	
Zinc	0.031	mg/L	0.005	SW6020A	01/08/14 14:57	JRH	7440-66-6	

Lab Sample ID: S59520.04 (continued)
Sample Tag: MW-13-47 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles								
TCL Semi-Volatile Organics								
Acenaphthene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	208-96-8	
Acetophenone	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	98-86-2	
Anthracene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	120-12-7	
Atrazine	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	1912-24-9	
1,1'-Biphenyl	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	92-52-4	
4-Bromophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	101-55-3	
di-n-Butyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	84-74-2	
Benzaldehyde	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	100-52-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	207-08-9	
Butyl benzyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	85-68-7	
2-Chloronaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	91-58-7	
2-Chlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	95-57-8	
4-Chloro-3-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	59-50-7	
4-Chloroaniline	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	106-47-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	7005-72-3	
Caprolactam	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	105-60-2	
Carbazole	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	86-74-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	108-60-1	
Chrysene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	218-01-9	
2,4-Dichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	120-83-2	
2,4-Dimethylphenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	105-67-9	
2,4-Dinitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	606-20-2	
4,6-Dinitro-2-methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	534-52-1	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	12/30/13 21:30	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	132-64-9	
Diethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	84-66-2	
Dimethyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	131-11-3	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	117-81-7	
Fluoranthene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	206-44-0	
Fluorene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	86-73-7	
Hexachlorobutadiene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	193-39-5	
Isophorone	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	91-57-6	
2-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	95-48-7	
3-, 4-Methylphenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	3/4-Cresol	
2-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	88-74-4	
2-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	88-75-5	

Lab Sample ID: S59520.04 (continued)
Sample Tag: MW-13-47 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
TCL Semi-Volatile Organics (continued)								
3-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	100-01-6	
4-Nitrophenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	100-02-7	
N-Nitrosodi-n-propylamine	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	621-64-7	
N-Nitrosodiphenylamine	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	86-30-6	
Naphthalene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	91-20-3	
Nitrobenzene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	98-95-3	
di-n-Octyl phthalate	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	117-84-0	
Pentachlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	87-86-5	
Phenanthrene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	85-01-8	
Phenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	108-95-2	
Pyrene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	129-00-0	
2,4,5-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	88-06-2	
Hexachlorobenzene	Not detected	ug/L	1	SW8270D	12/30/13 21:30	PL	118-74-1	
Organics - Volatiles								
1,4-Dioxane	Not detected	ug/L	5	SW8260B - SIM	12/20/13 19:57	WAT	123-91-1	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	76-13-1	
Acetone	Not detected	ug/L	10	SW8260C	12/20/13 16:27	JGH	67-64-1	
Carbon disulfide	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	12/20/13 16:27	JGH	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	12/20/13 16:27	JGH	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-01-4	
Bromomethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-35-4	
Methylene chloride	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	12/20/13 16:27	JGH	108-10-1	
2-Hexanone	Not detected	ug/L	10	SW8260C	12/20/13 16:27	JGH	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-27-4	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	108-87-2	

Lab Sample ID: S59520.04 (continued)
Sample Tag: MW-13-47 (12-19-13)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	124-48-1	
Chlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	12/20/13 16:27	JGH		
o-Xylene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	95-50-1	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	120-82-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	106-93-4	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	12/20/13 16:27	JGH	96-12-8	

Lab Sample ID: S59520.05
Sample Tag: MW-13-34 (12-19-13)
Collected Date/Time: 12/19/2013 16:15
Matrix: Groundwater
COC Reference: 75157

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	5.4	IR
2	250ml Plastic	None	Yes	5.4	IR
2	40ml Glass	H2SO4	Yes	5.4	IR
1	1L Plastic	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Extraction / Prep.								
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	01/08/14 11:00	CCM		
Inorganics								
Alkalinity as CaCO3	452	mg/L	1	SM2320B	12/30/13 12:45	JKB		
Bicarbonate Alkalinity	452	mg/L	1	SM2320B	12/30/13 12:45	JKB		
Bromide	Not detected	mg/L	2.5	E300.0	12/31/13 13:29	JDP	24959-67-9	
Bromide (Replicate 01)	Not detected	mg/L	1	E300.0	01/30/14 06:59	JDP	24959-67-9	F
Chloride	329	mg/L	50	E300.0	12/31/13 16:44	JDP	16887-00-6	
Hardness as CaCO3	654	mg/L		SM2340B	01/08/14 16:38	JRH		
Sulfate	172	mg/L	50	E300.0	12/31/13 16:44	JDP	14808-79-8	
TOC	8.0	mg/L	1	SM 5310C	12/30/13 17:13	JKB		
Total Dissolved Solids	1,260	mg/L	1	SM2540C	12/27/13 17:20	WAR		F
Total Suspended Solids	18	mg/L	1	SM2540D	12/27/13 20:30	ASB		F
Metals								
Calcium, Dissolved	257	mg/L	1.0	SW6020A	01/08/14 16:38	JRH	7440-70-2	
Calcium	261	mg/L	1.0	SW6020A	01/08/14 16:38	JRH	7440-70-2	
Iron, Dissolved	10.6	mg/L	0.02	SW6020A	01/08/14 15:02	JRH	7439-89-6	
Iron	12.7	mg/L	0.02	SW6020A	01/08/14 15:00	JRH	7439-89-6	
Magnesium, Dissolved	82.1	mg/L	0.5	SW6020A	01/08/14 16:38	JRH	7439-95-4	
Magnesium	82.2	mg/L	0.5	SW6020A	01/08/14 16:38	JRH	7439-95-4	
Manganese, Dissolved	0.202	mg/L	0.005	SW6020A	01/08/14 15:02	JRH	7439-96-5	
Manganese	0.201	mg/L	0.005	SW6020A	01/08/14 15:00	JRH	7439-96-5	
Potassium, Dissolved	4.98	mg/L	0.5	SW6020A	01/08/14 16:38	JRH	7440-09-7	
Potassium	5.19	mg/L	0.5	SW6020A	01/08/14 16:38	JRH	7440-09-7	
Sodium, Dissolved	108	mg/L	1.0	SW6020A	01/08/14 16:38	JRH	7440-23-5	
Sodium	106	mg/L	1.0	SW6020A	01/08/14 16:38	JRH	7440-23-5	

F-Analysis run outside of holding time

Merit Laboratories, Inc.

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C.O.C. PAGE # 1 OF 1

75157

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Randy Christensen
COMPANY: Arcadis
ADDRESS: 10559 Citation Drive Suite 100
CITY: Brighton STATE: MI ZIP CODE: 48116
PHONE NO.: 810 225 1949 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Randy.Christensen@Arcadis-US.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☐ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Plant 3
SAMPLER(S) (PLEASE PRINT/SIGN NAME): Cliff Wright

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	Tot VOC (1-4 SIM)	Tot Metal	Diss Metal	SVOCs	WG	Diss WG
59520.01	12-19	7:00	Trip Blank	GW	1		1											
.02	12-19	9:15	MW-13-46 (12-19-13)	GW	6	2	3	1					X	X		X		
.03	12-19	12:00	MW-13-48 (12-19-13)	GW	12	4	3	2	3				X	X	X	X	X	X
.04	12-19	14:30	MW-13-47 (12-19-13)	GW	7	2	3	2					X	X	X	X		
.05	12-19	16:15	MW-13-34 (12-19-13)	GW	6				2								X	X

RELINQUISHED BY: SIGNATURE/ORGANIZATION ☐ Sampler DATE 12-19-13 TIME 18:00
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 12-19-13 TIME 18:00
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE 12-20-13 TIME 9:55

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE 12-20-13 TIME
RECEIVED BY: SIGNATURE/ORGANIZATION Kevin George DATE 12/20/13 TIME 1110

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

ARCADIS

Appendix D

Assessment of Other VOCs Coincident with Lower 1,4-Dioxane Plume

AREA 14

AOI 3-11
Former scrap metal storage

Areas 20 & 21, AOI 3-51
Building 304 and 305 press pit operations
CoCs: SVOCs (Area 20) and metals

AREA 20

AREA 21

AREA 16

AREA 15

AREA 11

Area 11, AOI 3-54
Suspected source area of lower 1,4-dioxane
CoCs: 1,4-dioxane and CVOCs

AREA 19

Area 8, AOIs 2-7, 2-37, & 2-38
Paint shop sumps and trenches,
press pits and scrap steel pits
CoCs: SVOCs and metals

AREA 8

Area 3, AOI 2-11
CoCs: 1,4-dioxane and metals

AREA 3

Area 5-1, AOIs 2-11, 2-31, 2-32,
2-33, 2-34, 2-35, & 2-49
Press pits and associated sumps,
pits, and trenches
CoCs: 1,4-dioxane, SVOCs, and metals

AREA 5

AREA 5-1

AOI 2-11
Former gondola storage area.
Oil filter and air filter residue storage.

Area 4, AOI 2-8
Former outdoor storage area. Likely
managed waste paint, spent solvents,
and used oil.

AREA 4

AREA 5-4

AREA 5-5

AOI 2-14
Former scrap metal storage area.

Area 5-2, AOIs 2-6, 2-14, 2-36, 2-52
Former oily waste treatment and scrap
metal storage. Quench oil operations
and pickling room.
CoCs: 1,4-dioxane, BTEX, CVOCs,
SVOCs, PCBs, metals, & LNAPL

AOI 2-23
Acid house and two storage tanks
with unknown contents.

AREA 5-2

Area 2, AOI 2-12
Former empty CSA, managed
empty 55-gallon drums.

AREA 2

AREA 1

Area 1, AOI 2-5
Used oil UST, managed used oil
and antifreeze from GM's truck
fleet maintenance operations.

3-51 3-11 3-54 3-13 3-15 3-17

2-38 2-7 2-37 2-11 2-31 2-49 2-33 2-35 2-32 2-34 2-39 2-8 2-54/55 2-26 2-27/65 2-6 2-36 2-14 2-52 2-15 2-23 2-12 2-16 2-5

LEGEND

AOIs -RFI PHASE 1 DETERMINATION

- FURTHER ACTION
- NO FURTHER ACTION
- DEEP 1,4-DIOXANE / OTHER VOCs GROUNDWATER IMPACTS
- PLANT 2
- PLANT 3
- PLANT 6

0 320 640

SCALE IN FEET

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

LOWER 1,4-DIOXANE PLUME AOI SUMMARY

ARCADIS

FIGURE
D-1

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
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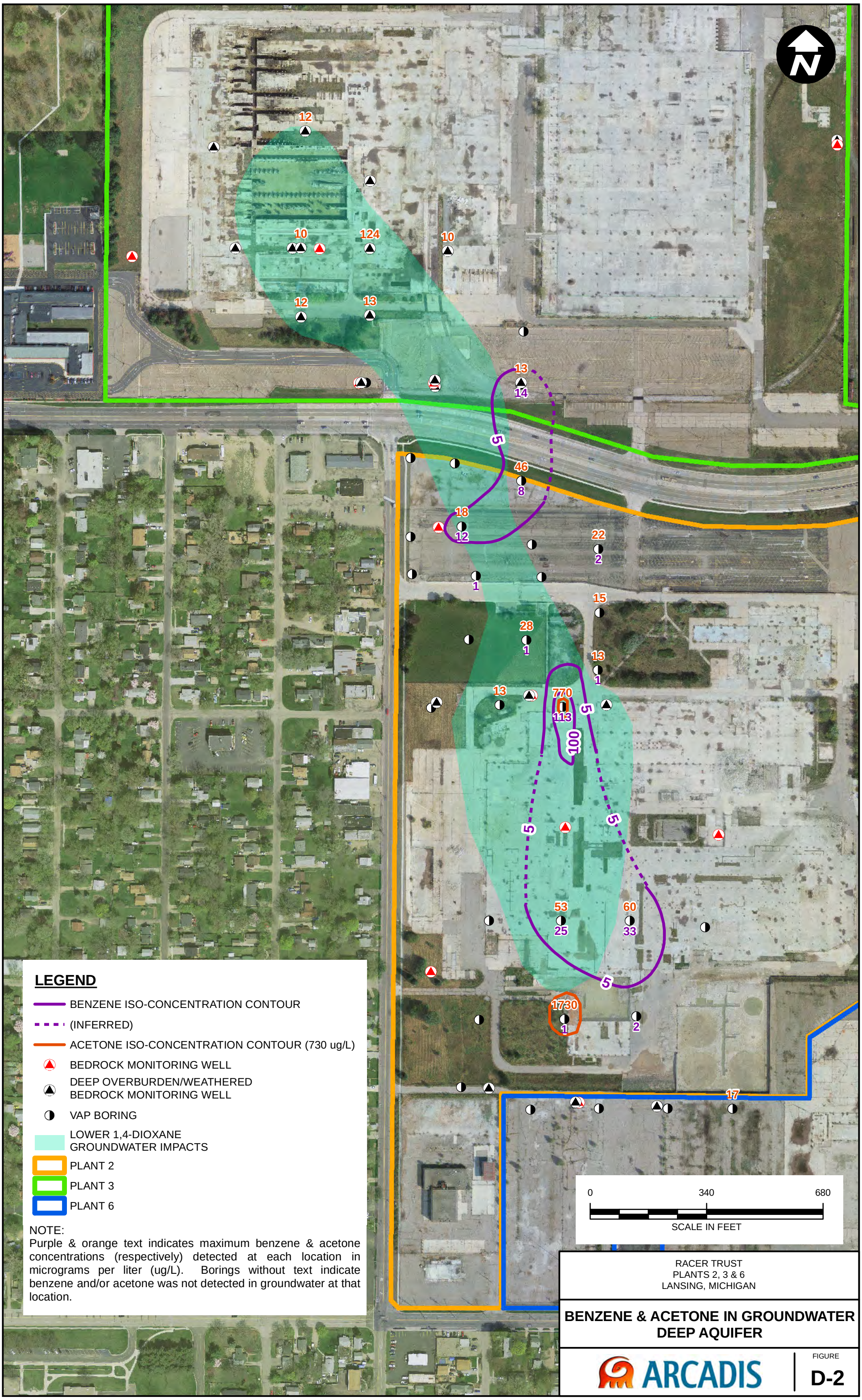

LEGEND

- BENZENE ISO-CONCENTRATION CONTOUR
- (INFERRED)
- ACETONE ISO-CONCENTRATION CONTOUR (730 ug/L)
- BEDROCK MONITORING WELL
- DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL
- VAP BORING
- LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
- PLANT 2
- PLANT 3
- PLANT 6

NOTE:
Purple & orange text indicates maximum benzene & acetone concentrations (respectively) detected at each location in micrograms per liter (ug/L). Borings without text indicate benzene and/or acetone was not detected in groundwater at that location.

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

BENZENE & ACETONE IN GROUNDWATER DEEP AQUIFER

ARCADIS

FIGURE
D-2

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
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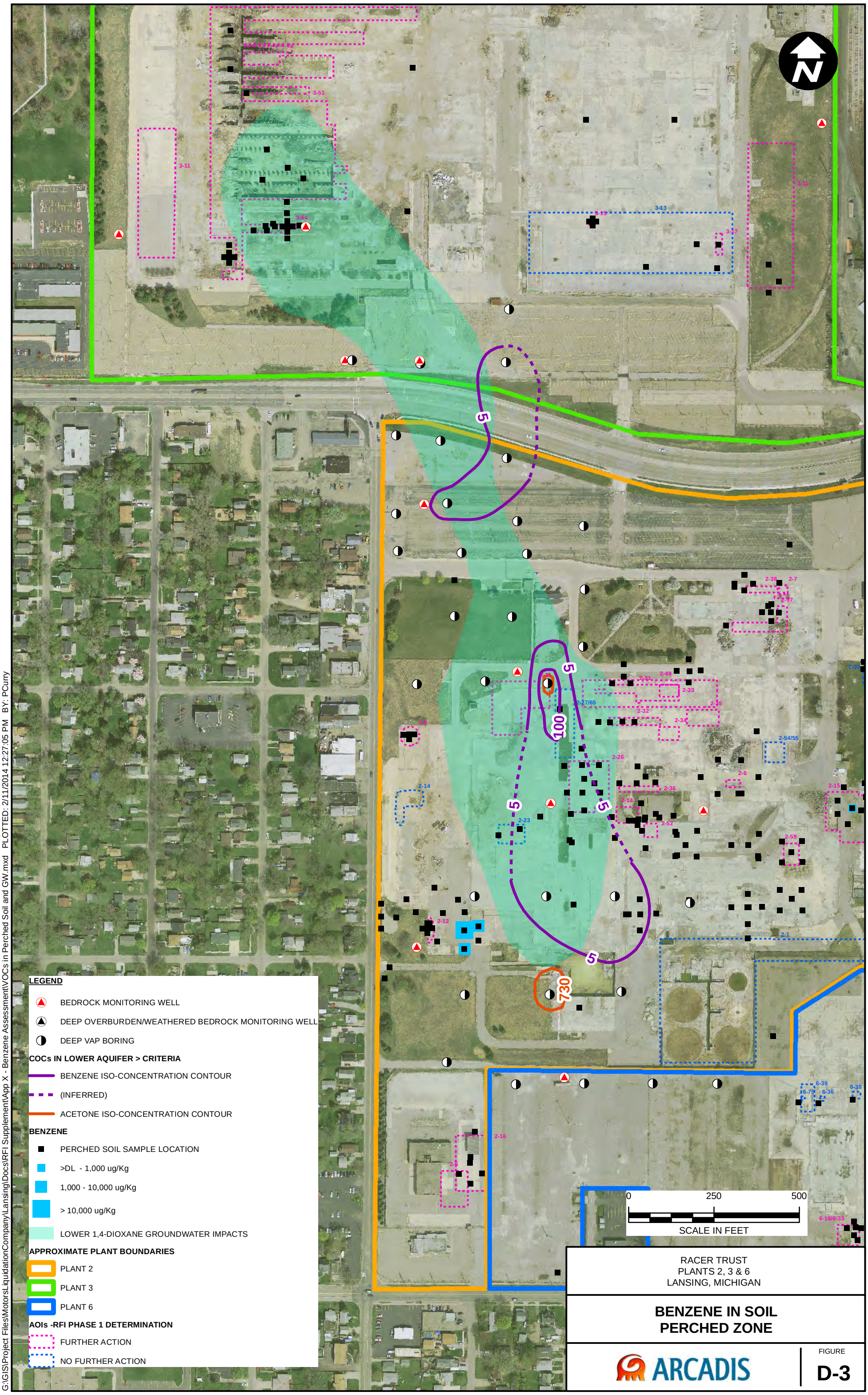

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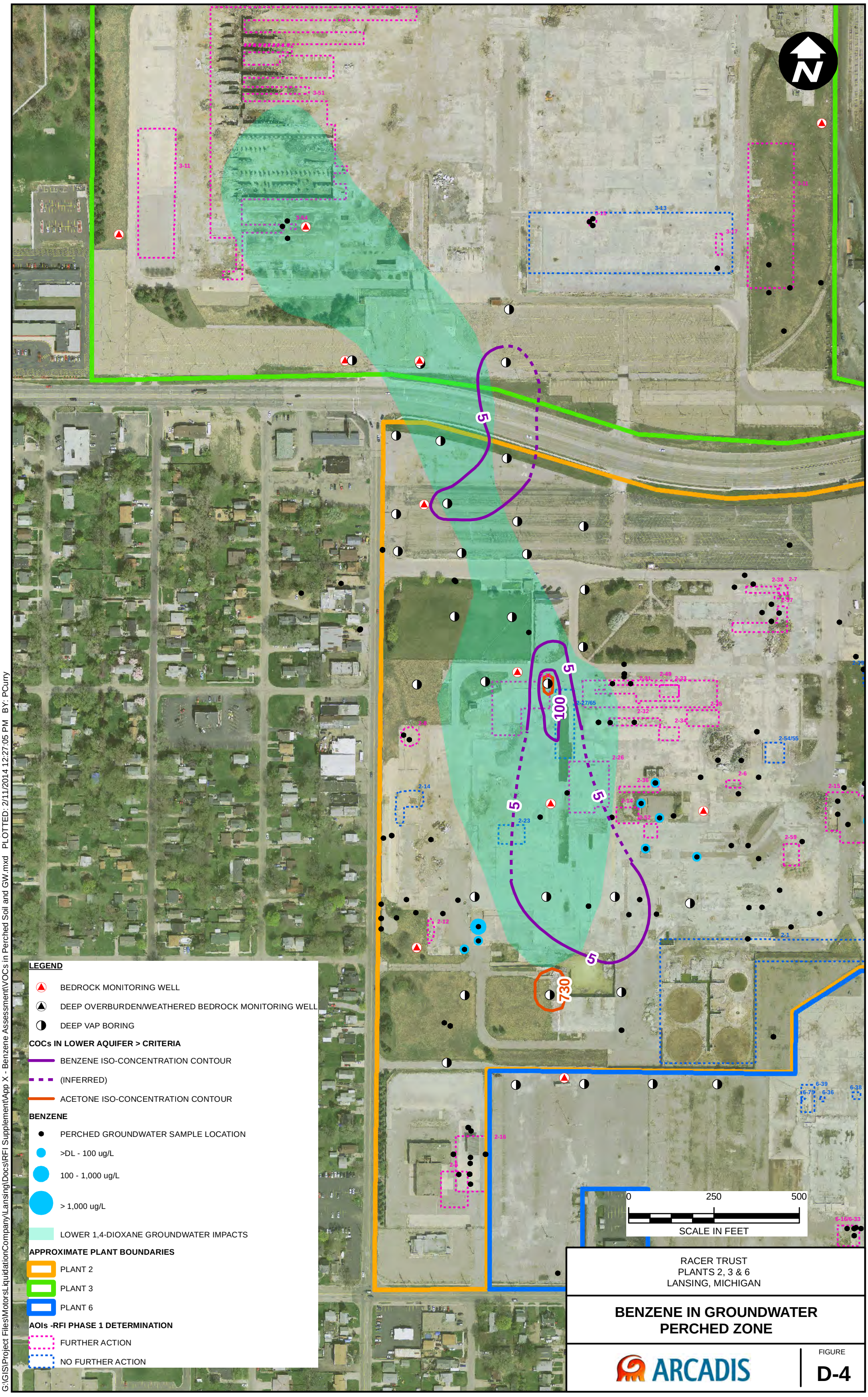
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

BENZENE IN SOIL PERCHED ZONE

ARCADIS

FIGURE
D-3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3-51
3-11
3-64
3-43
3-17
3-11
5
100
730
2-38
2-7
2-37
2-49
2-31
2-33
2-27/65
2-32
2-35
2-34
2-54/55
2-26
2-36
2-6
2-14
2-15
2-52
2-59
2-23
2-12
2-1
6-39
6-79
6-36
6-38
2-16
6-16/6-33
LEGEND
BEDROCK MONITORING WELL
DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL
DEEP VAP BORING
COCs IN LOWER AQUIFER > CRITERIA
BENZENE ISO-CONCENTRATION CONTOUR
(INFERRED)
ACETONE ISO-CONCENTRATION CONTOUR
BENZENE
PERCHED GROUNDWATER SAMPLE LOCATION
>DL - 100 ug/L
100 - 1,000 ug/L
> 1,000 ug/L
LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
APPROXIMATE PLANT BOUNDARIES
PLANT 2
PLANT 3
PLANT 6
AOIs -RFI PHASE 1 DETERMINATION
FURTHER ACTION
NO FURTHER ACTION
0
250
500
SCALE IN FEET
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN
BENZENE IN GROUNDWATER
PERCHED ZONE
ARCADIS
FIGURE
D-4
CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
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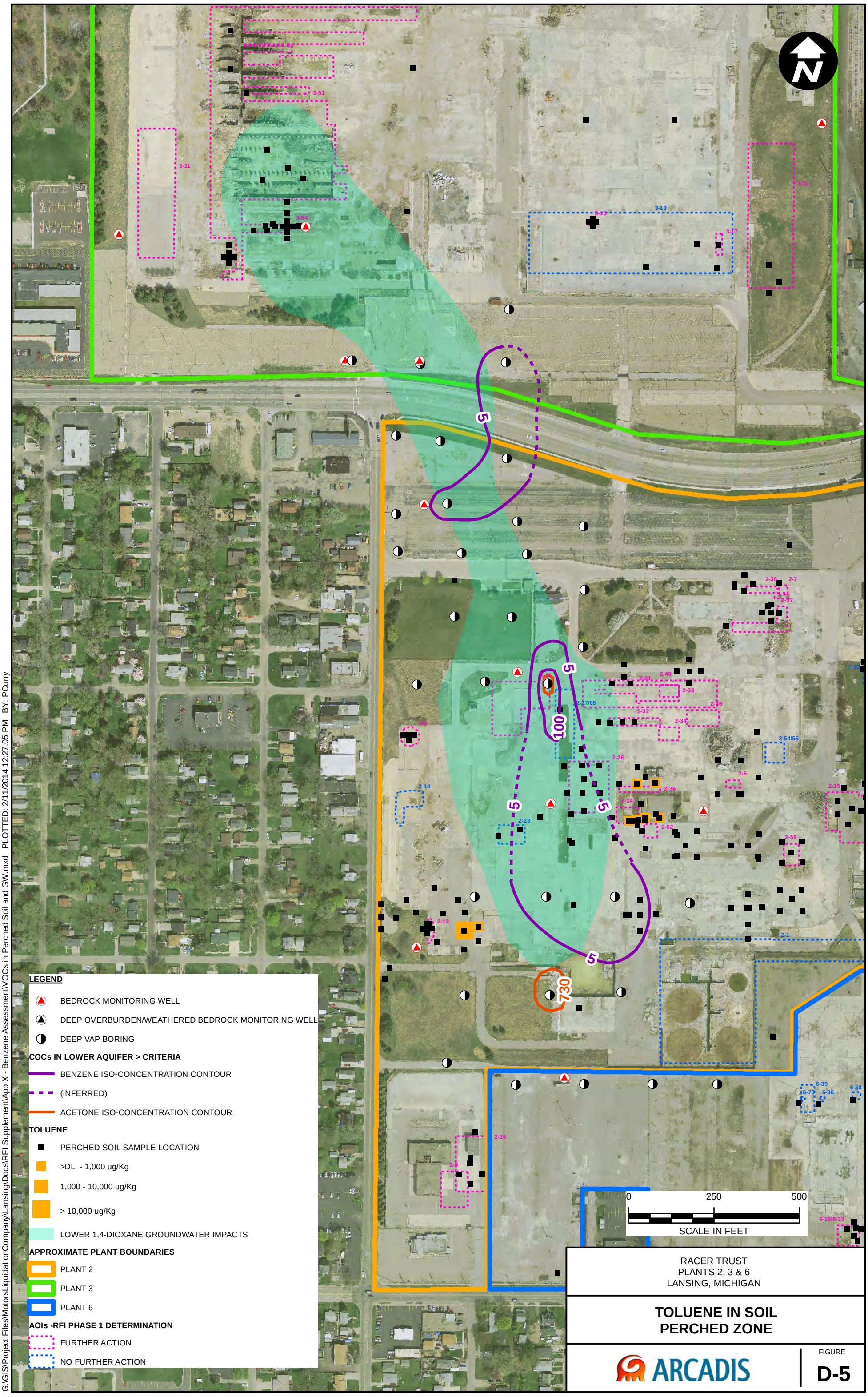
N
3-51
3-11
3-84
3-43
3-17
5
100
730
2-38
2-7
2-37
2-49
2-33
2-27/65
2-32
2-34
2-35
2-54/55
2-26
2-6
2-36
2-14
2-23
2-52
2-59
2-12
2-1
6-39
6-79
6-36
6-38
2-16
6-18/6-33
LEGEND
BEDROCK MONITORING WELL
DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL
DEEP VAP BORING
COCs IN LOWER AQUIFER > CRITERIA
BENZENE ISO-CONCENTRATION CONTOUR
(INFERRED)
ACETONE ISO-CONCENTRATION CONTOUR
TOLUENE
PERCHED SOIL SAMPLE LOCATION
>DL - 1,000 ug/Kg
1,000 - 10,000 ug/Kg
> 10,000 ug/Kg
LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
APPROXIMATE PLANT BOUNDARIES
PLANT 2
PLANT 3
PLANT 6
AOIs -RFI PHASE 1 DETERMINATION
FURTHER ACTION
NO FURTHER ACTION
0
250
500
SCALE IN FEET
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN
TOLUENE IN SOIL
PERCHED ZONE
ARCADIS
FIGURE
D-5
CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
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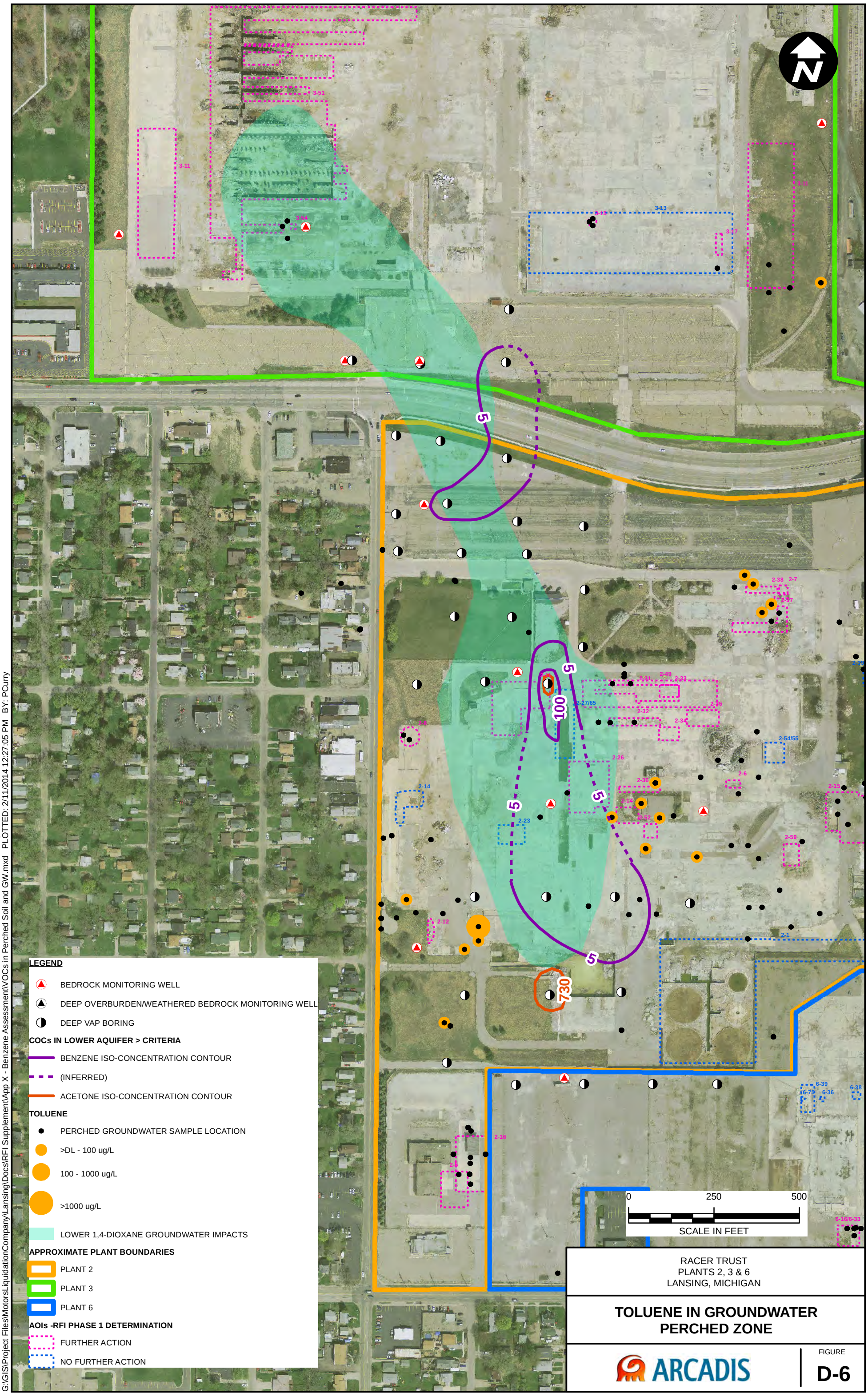

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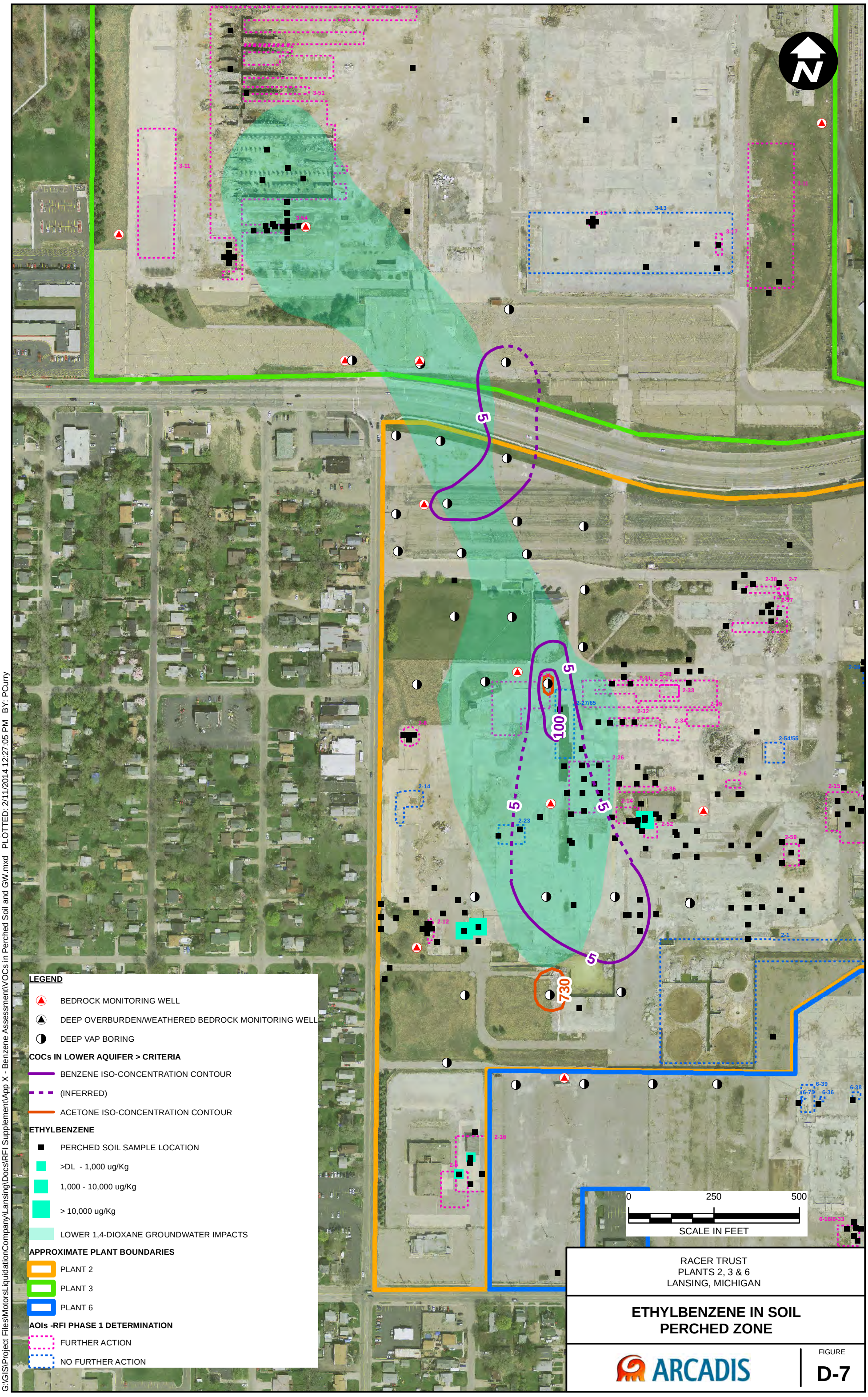

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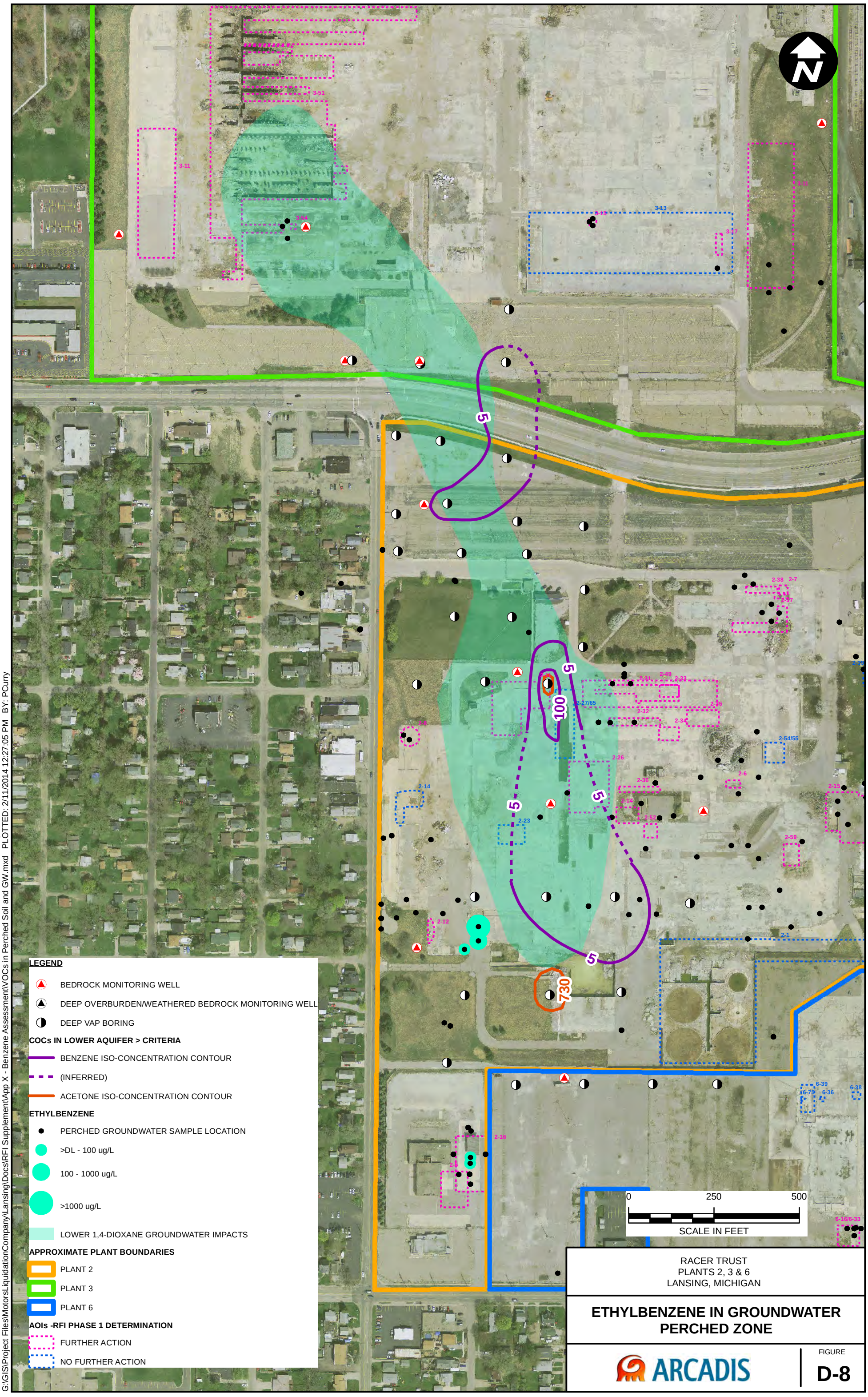
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

ETHYLBENZENE IN SOIL PERCHED ZONE

ARCADIS

FIGURE
D-7



LEGEND

- BEDROCK MONITORING WELL
- DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL
- DEEP VAP BORING

COCs IN LOWER AQUIFER > CRITERIA

- BENZENE ISO-CONCENTRATION CONTOUR
- (INFERRED)
- ACETONE ISO-CONCENTRATION CONTOUR

ETHYLBENZENE

- PERCHED GROUNDWATER SAMPLE LOCATION
- >DL - 100 ug/L
- 100 - 1000 ug/L
- >1000 ug/L
- LOWER 1,4-DIOXANE GROUNDWATER IMPACTS

APPROXIMATE PLANT BOUNDARIES

- PLANT 2
- PLANT 3
- PLANT 6

AOIs -RFI PHASE 1 DETERMINATION

- FURTHER ACTION
- NO FURTHER ACTION

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

ETHYLBENZENE IN GROUNDWATER PERCHED ZONE

ARCADIS

FIGURE
D-8

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
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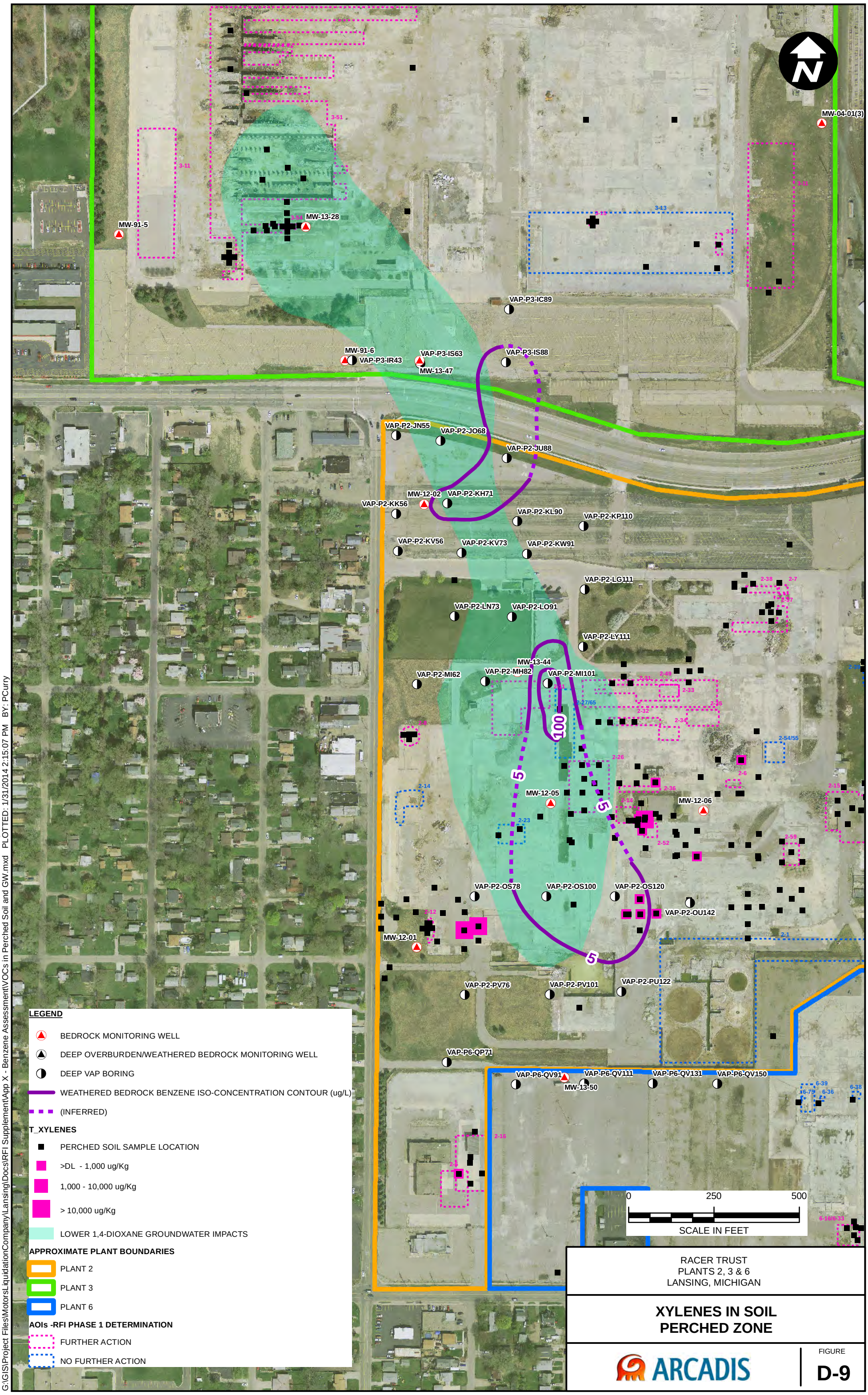

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

XYLENES IN SOIL PERCHED ZONE

ARCADIS

FIGURE
D-9

CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
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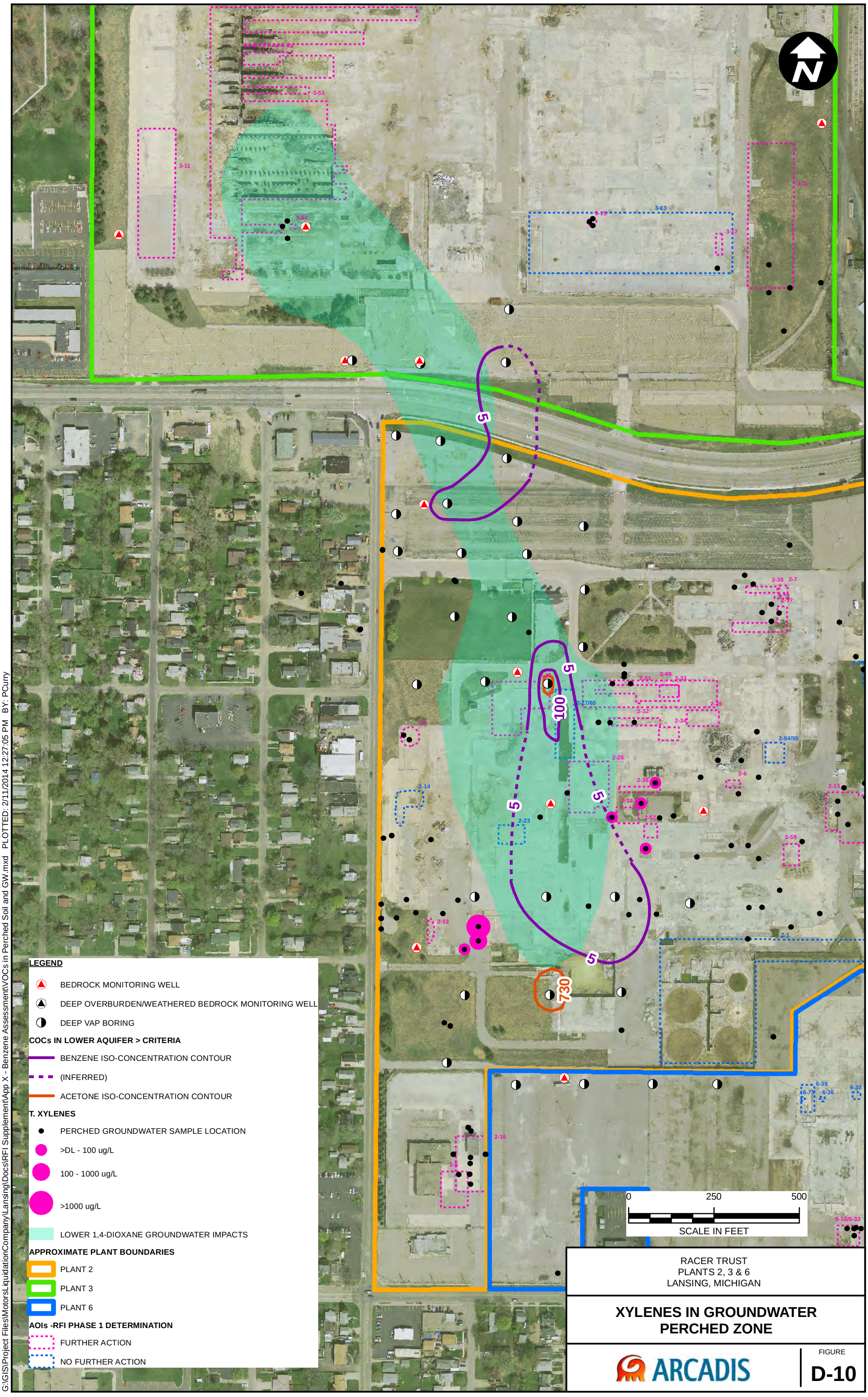

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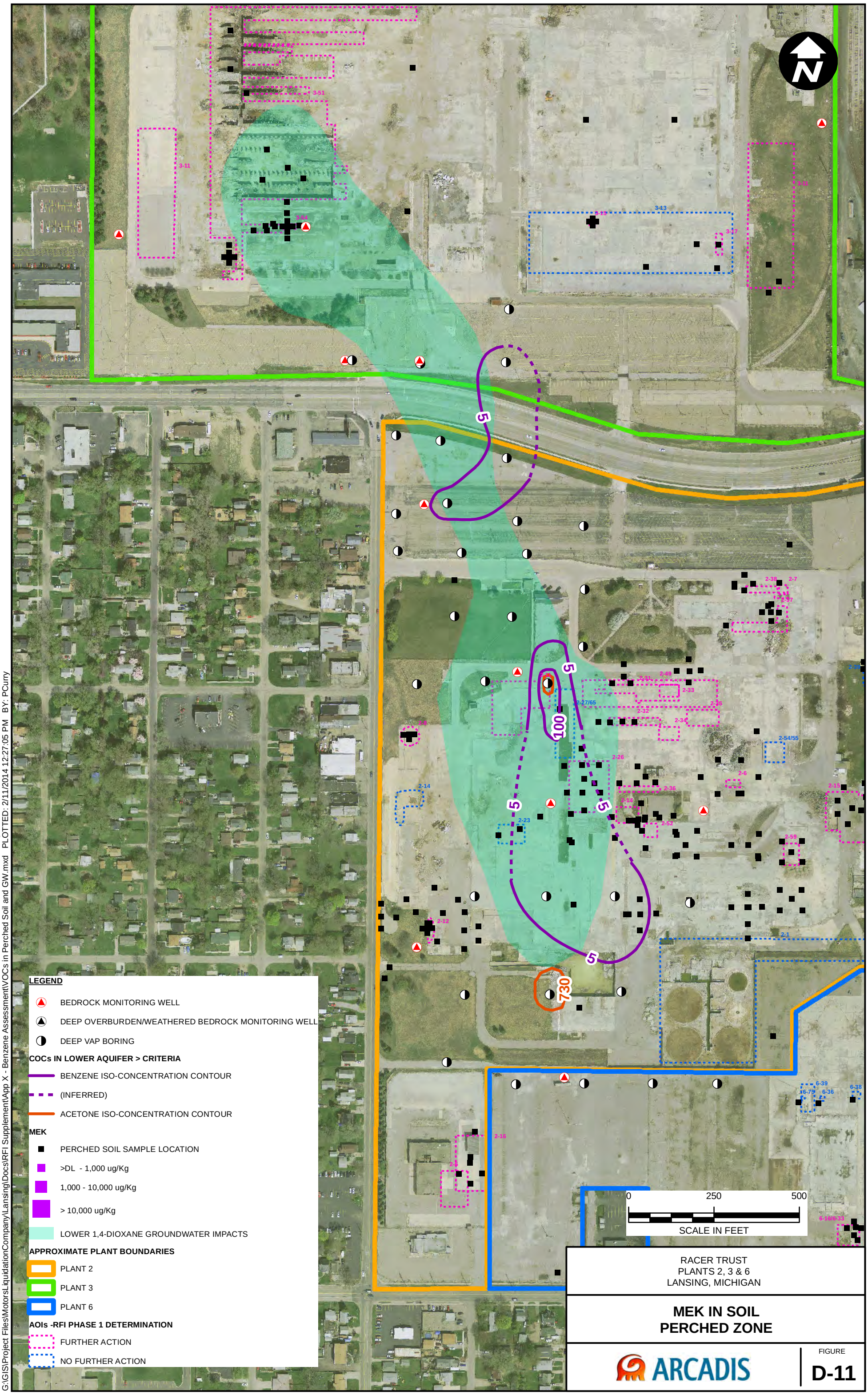


LEGEND

- BEDROCK MONITORING WELL
- DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL
- DEEP VAP BORING

COCs IN LOWER AQUIFER > CRITERIA

- BENZENE ISO-CONCENTRATION CONTOUR
- (INFERRED)
- ACETONE ISO-CONCENTRATION CONTOUR

MEK

- PERCHED SOIL SAMPLE LOCATION
- >DL - 1,000 ug/Kg
- 1,000 - 10,000 ug/Kg
- > 10,000 ug/Kg
- LOWER 1,4-DIOXANE GROUNDWATER IMPACTS

APPROXIMATE PLANT BOUNDARIES

- PLANT 2
- PLANT 3
- PLANT 6

AOIs -RFI PHASE 1 DETERMINATION

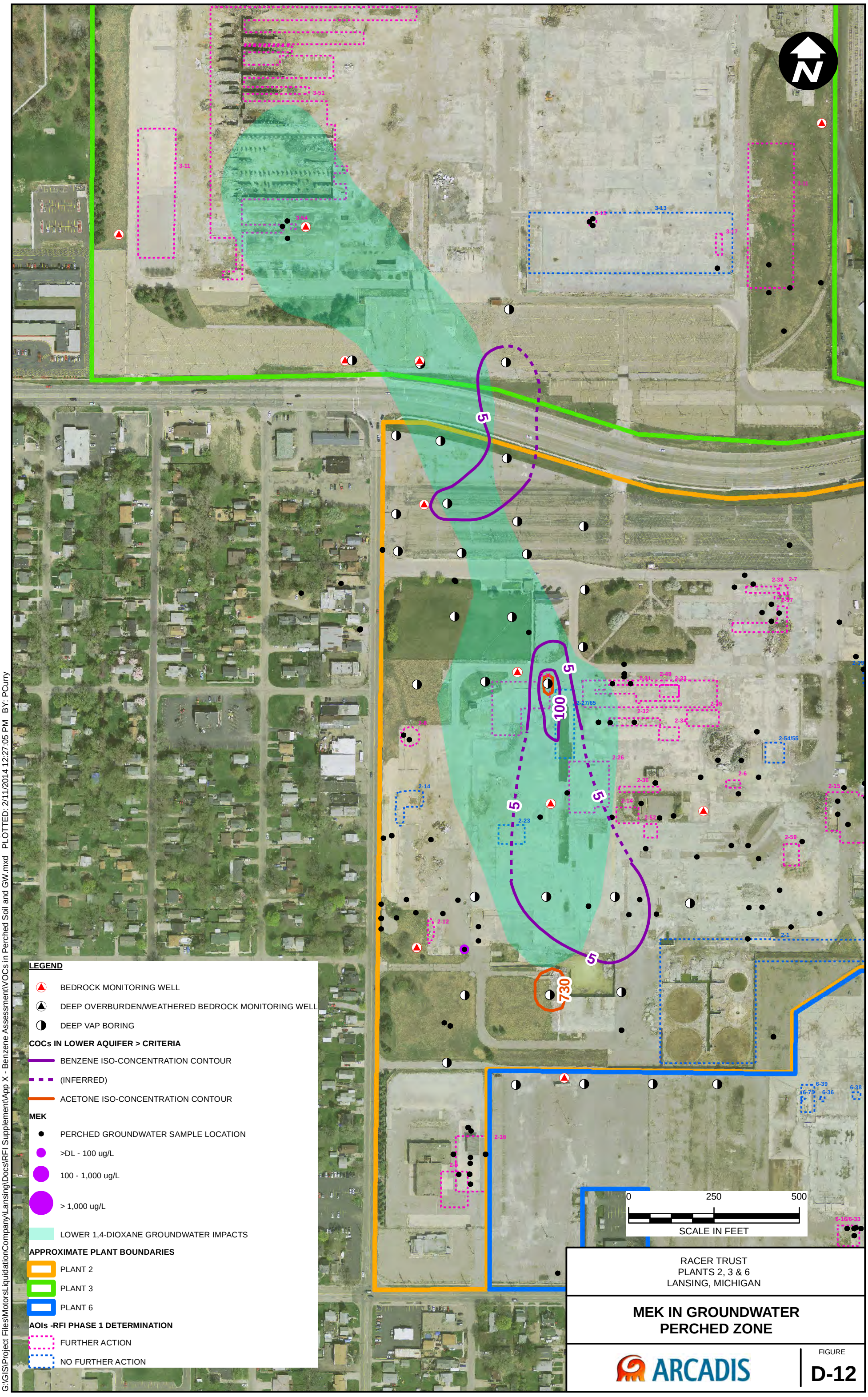
- FURTHER ACTION
- NO FURTHER ACTION

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

MEK IN SOIL PERCHED ZONE

ARCADIS

FIGURE
D-11



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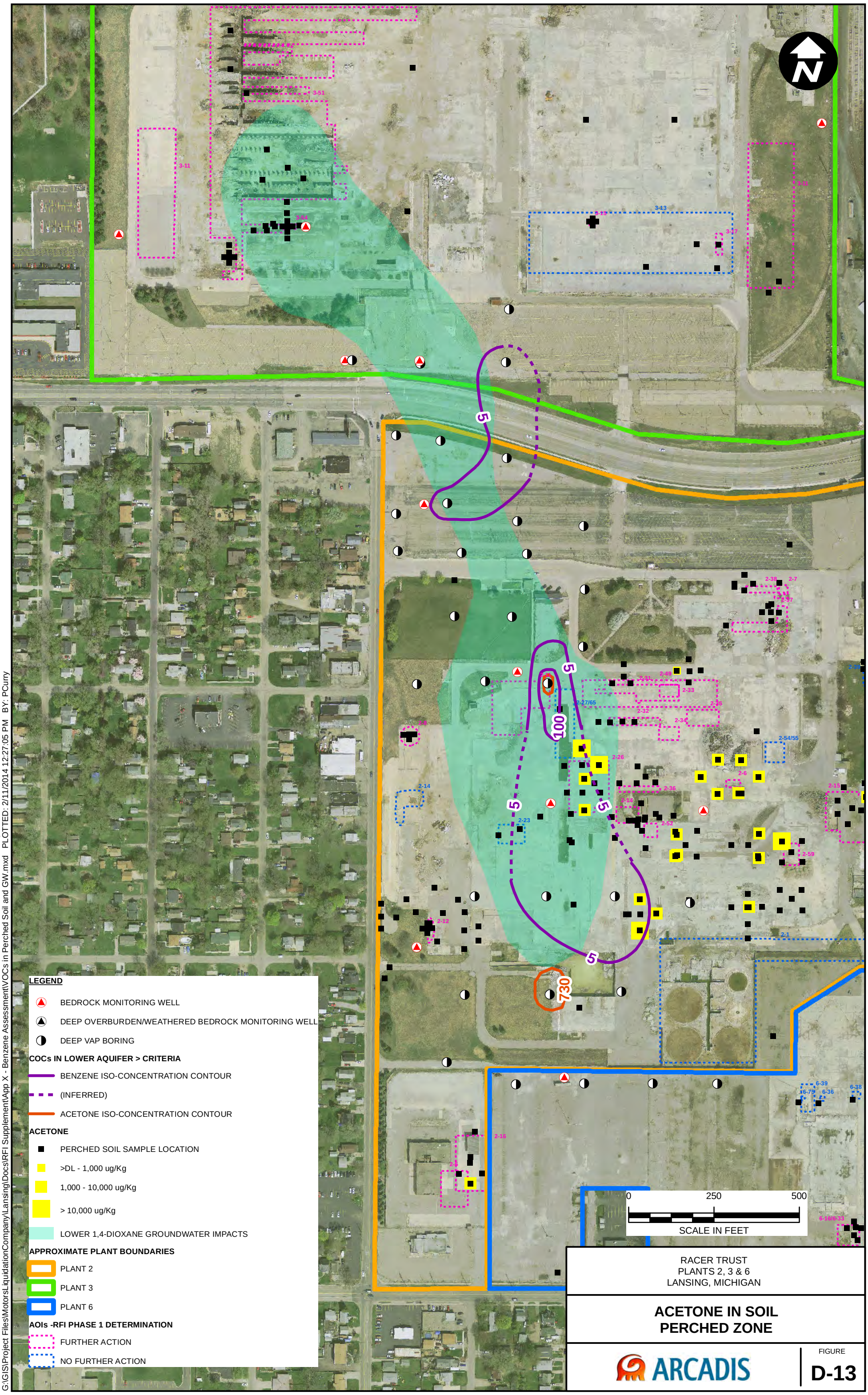


LEGEND

- BEDROCK MONITORING WELL
- DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL
- DEEP VAP BORING

COCs IN LOWER AQUIFER > CRITERIA

- BENZENE ISO-CONCENTRATION CONTOUR
- (INFERRED)
- ACETONE ISO-CONCENTRATION CONTOUR

ACETONE

- PERCHED SOIL SAMPLE LOCATION
- >DL - 1,000 ug/Kg
- 1,000 - 10,000 ug/Kg
- > 10,000 ug/Kg
- LOWER 1,4-DIOXANE GROUNDWATER IMPACTS

APPROXIMATE PLANT BOUNDARIES

- PLANT 2
- PLANT 3
- PLANT 6

AOIs -RFI PHASE 1 DETERMINATION

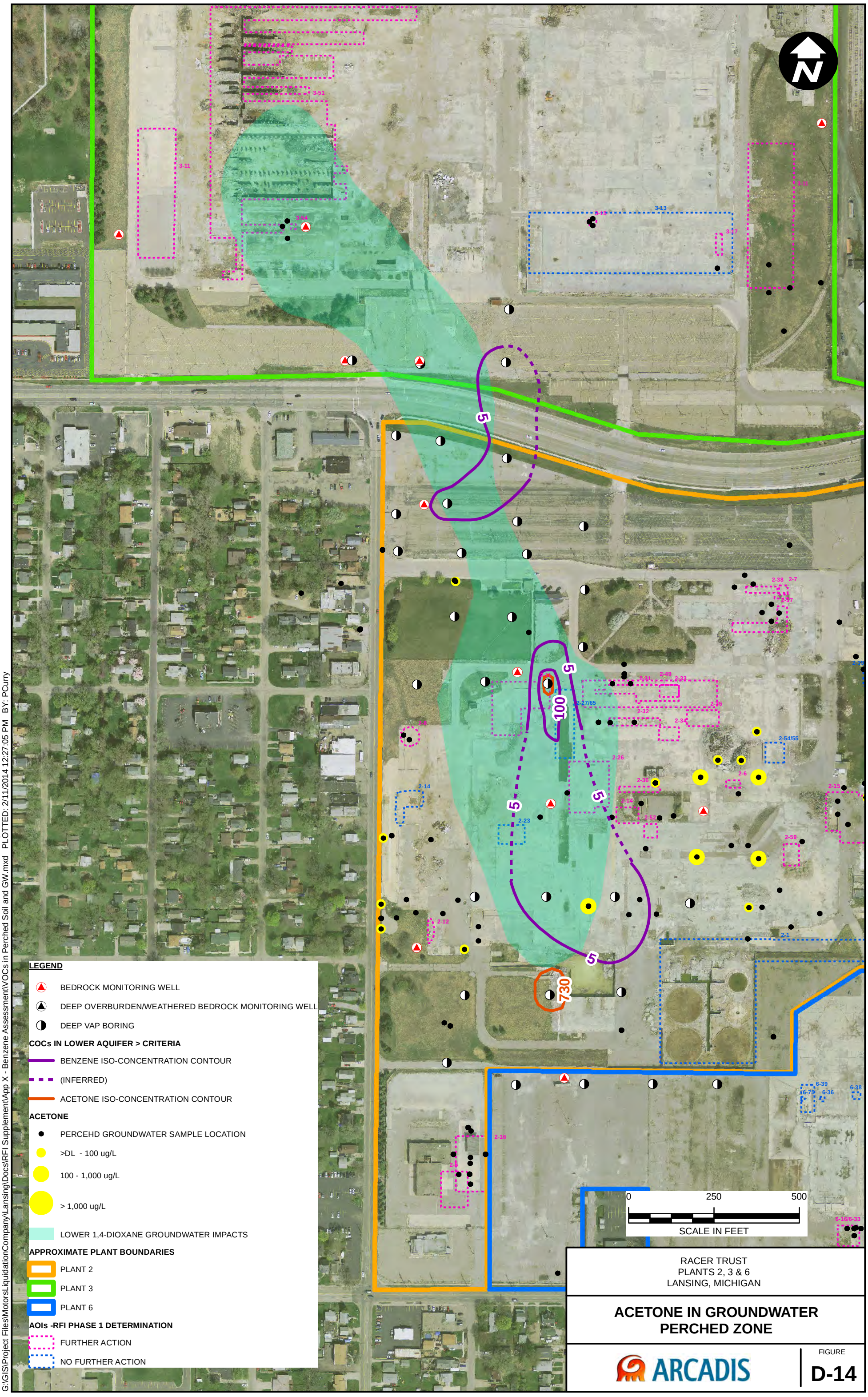
- FURTHER ACTION
- NO FURTHER ACTION

RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN

ACETONE IN SOIL PERCHED ZONE

ARCADIS

FIGURE
D-13


N
3-51
3-11
3-64
3-43
3-17
3-11
5
100
730
2-38
2-7
2-37
2-49
2-31
2-33
2-27/65
2-35
2-32
2-34
2-54/55
2-26
2-6
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2-14
2-15
2-52
2-59
2-23
2-12
2-1
6-39
6-79
6-36
6-38
2-16
6-16/6-33
LEGEND
BEDROCK MONITORING WELL
DEEP OVERBURDEN/WEATHERED BEDROCK MONITORING WELL
DEEP VAP BORING
COCs IN LOWER AQUIFER > CRITERIA
BENZENE ISO-CONCENTRATION CONTOUR
(INFERRED)
ACETONE ISO-CONCENTRATION CONTOUR
ACETONE
PERCEHD GROUNDWATER SAMPLE LOCATION
>DL - 100 ug/L
100 - 1,000 ug/L
> 1,000 ug/L
LOWER 1,4-DIOXANE GROUNDWATER IMPACTS
APPROXIMATE PLANT BOUNDARIES
PLANT 2
PLANT 3
PLANT 6
AOIs -RFI PHASE 1 DETERMINATION
FURTHER ACTION
NO FURTHER ACTION
0
250
500
SCALE IN FEET
RACER TRUST
PLANTS 2, 3 & 6
LANSING, MICHIGAN
ACETONE IN GROUNDWATER
PERCHED ZONE
ARCADIS
FIGURE
D-14
CITY: KNOXVILLE DIV: ENV DB: A.SMITH PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
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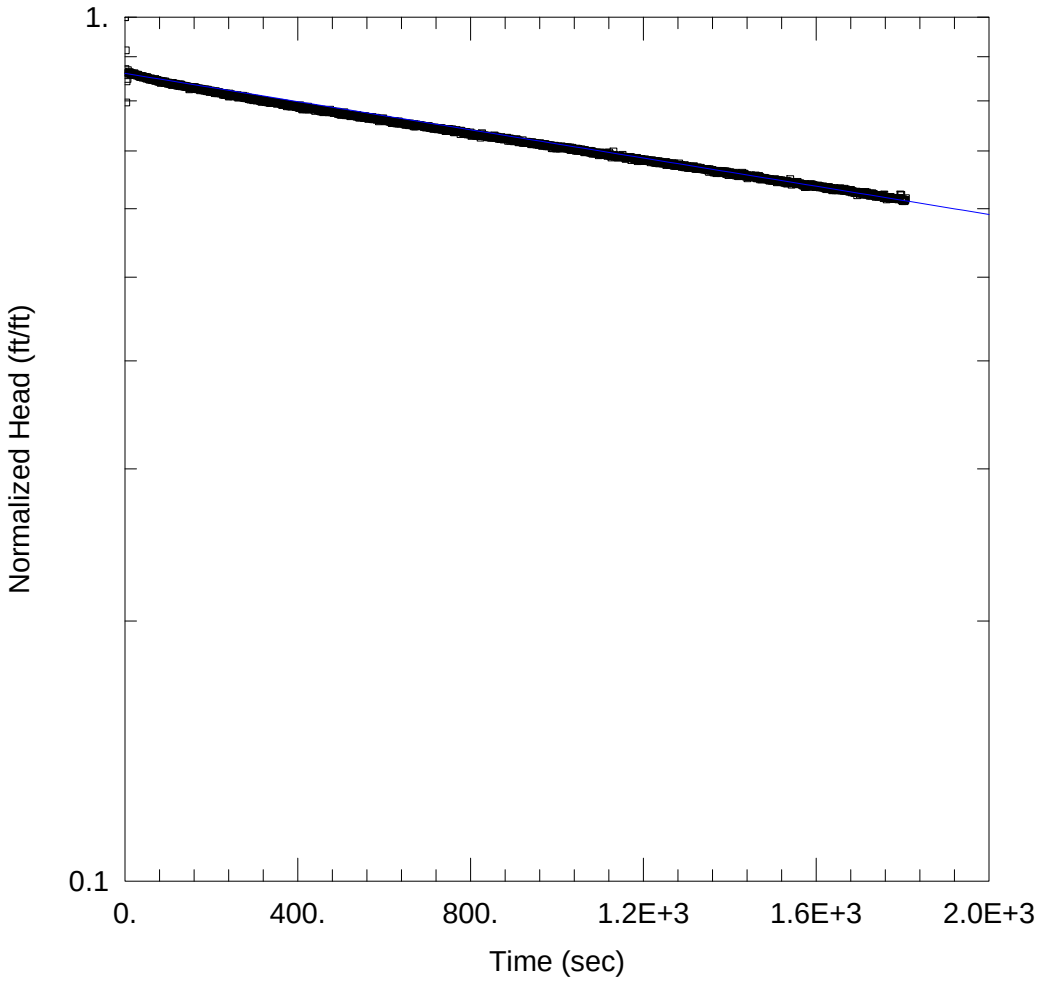
Appendix E

Slug Test Model Output (disc)



MW-12-21 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-12-21
Test Date: 12/18/13

AQUIFER DATA

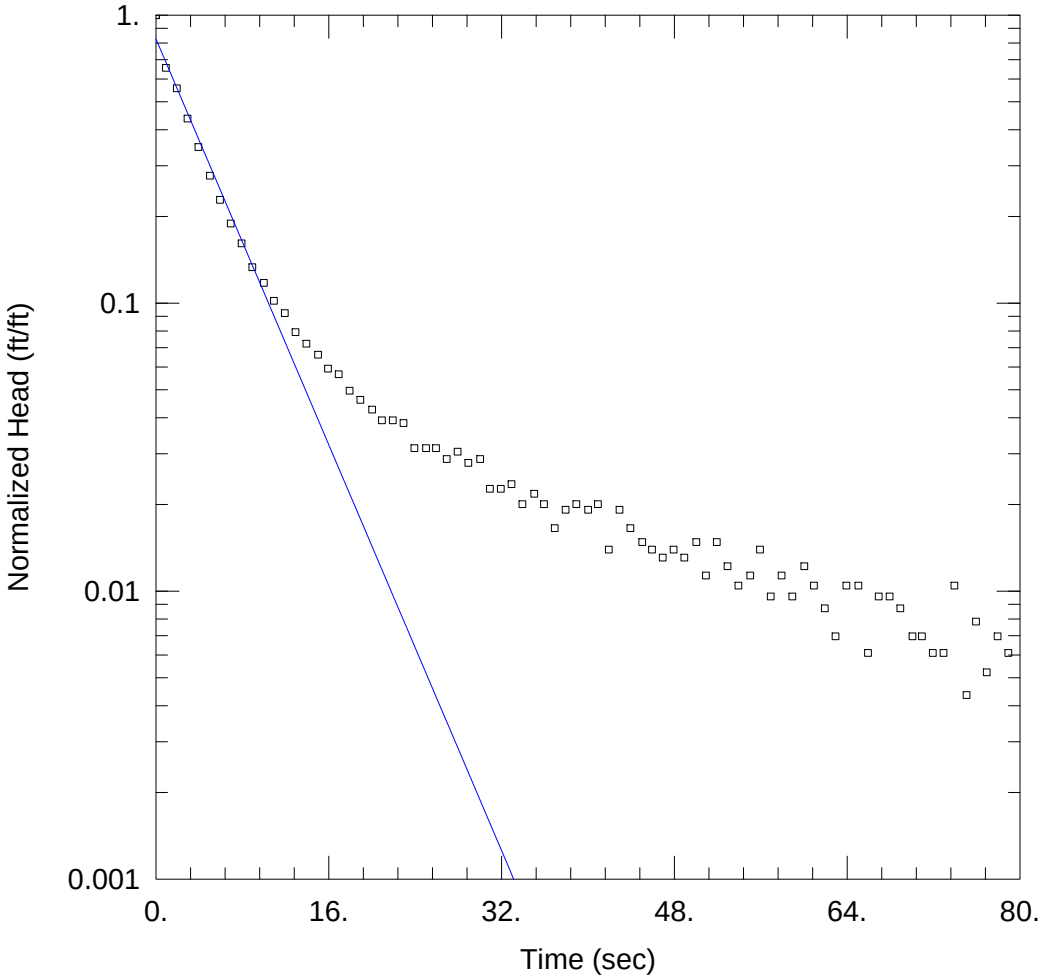
Saturated Thickness: 10.43 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-12-21)

Initial Displacement: 1.455 ft
Total Well Penetration Depth: 10.43 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.33 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 0.02851 ft/day
Solution Method: Bouwer-Rice
y0 = 1.252 ft



MW-13-22 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-22
Test Date: 12/18/13

AQUIFER DATA

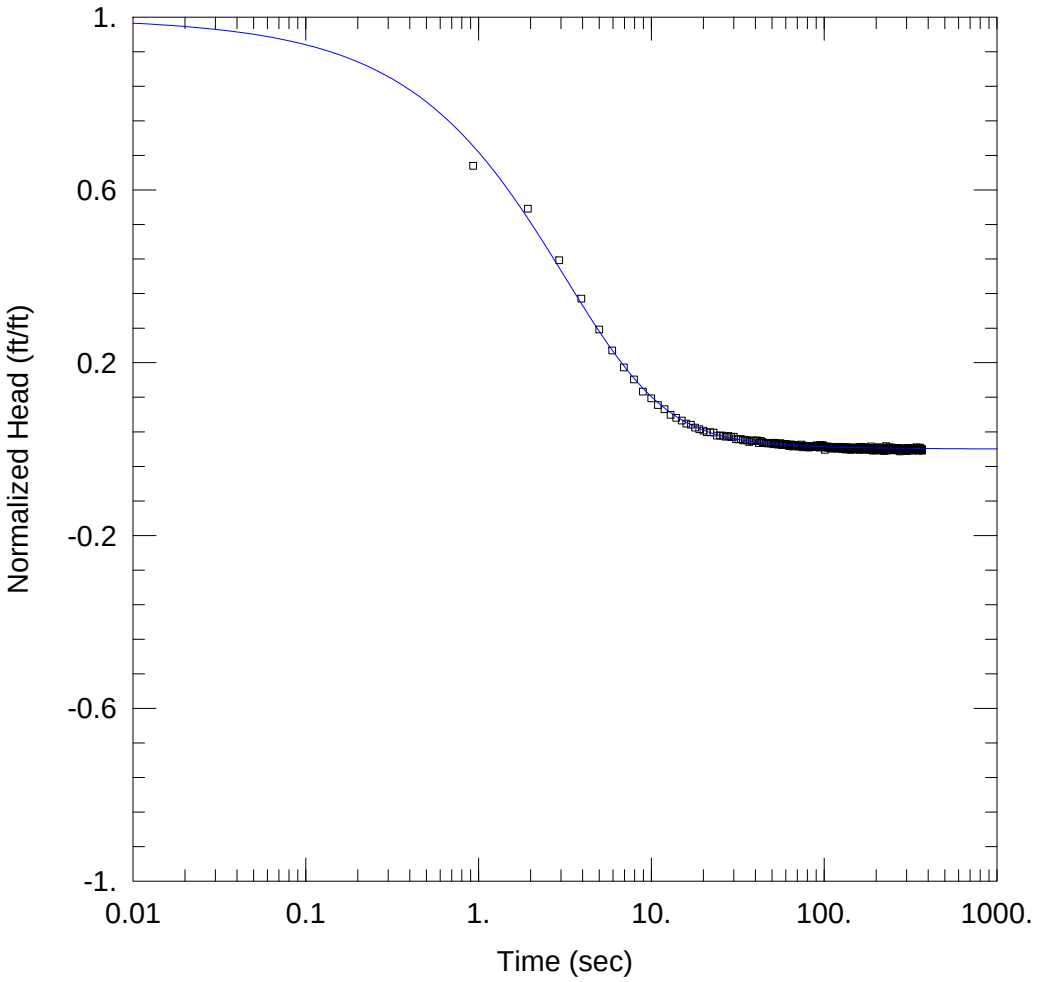
Saturated Thickness: 6. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-22)

Initial Displacement: 1.148 ft
Total Well Penetration Depth: 6. ft
Casing Radius: 0.083 ft
Static Water Column Height: 23.92 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 27.08 ft/day
Solution Method: Bouwer-Rice
y0 = 0.9488 ft



MW-13-22 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-22
Test Date: 12/18/13

AQUIFER DATA

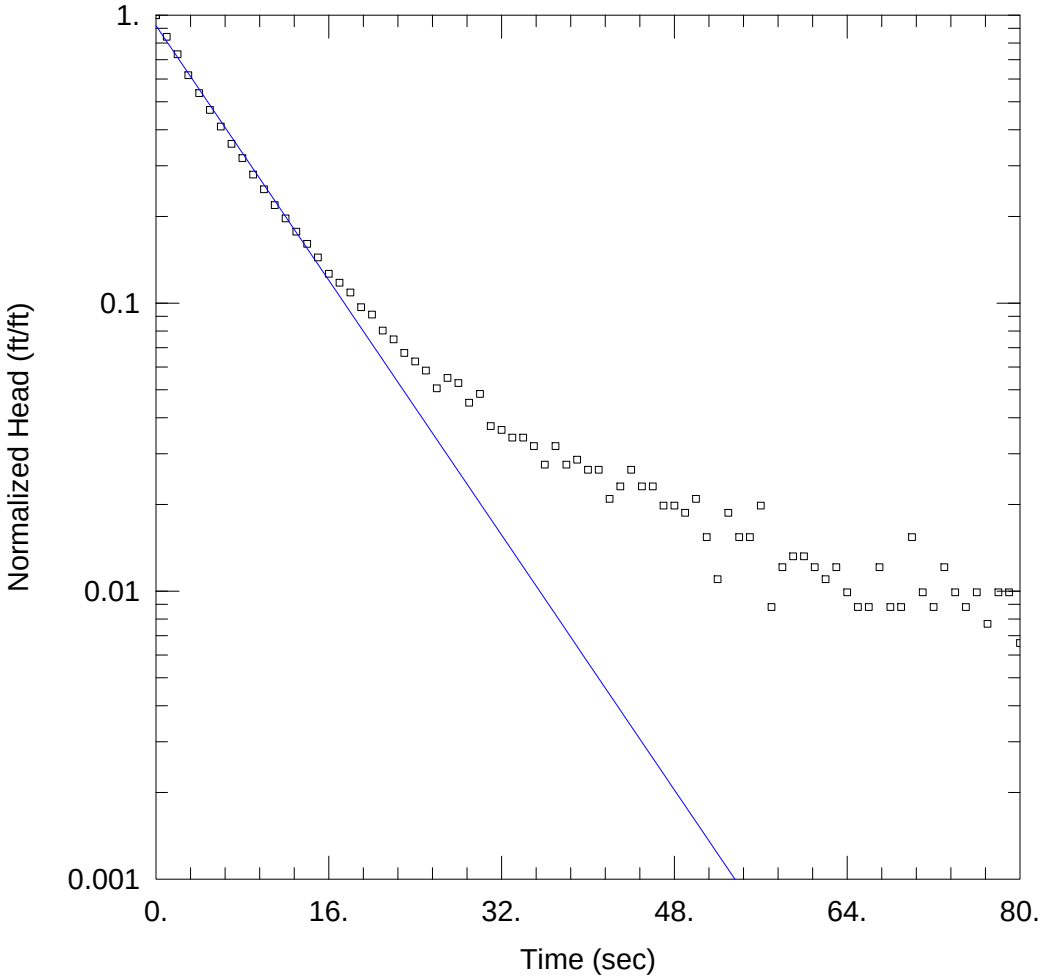
Saturated Thickness: 6. ft

WELL DATA (MW-13-22)

Initial Displacement: 1.148 ft
Total Well Penetration Depth: 6. ft
Casing Radius: 0.083 ft
Static Water Column Height: 23.92 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 46.7 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 0.0001122 ft^{-1}



MW-13-22 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-22
Test Date: 12/18/13

AQUIFER DATA

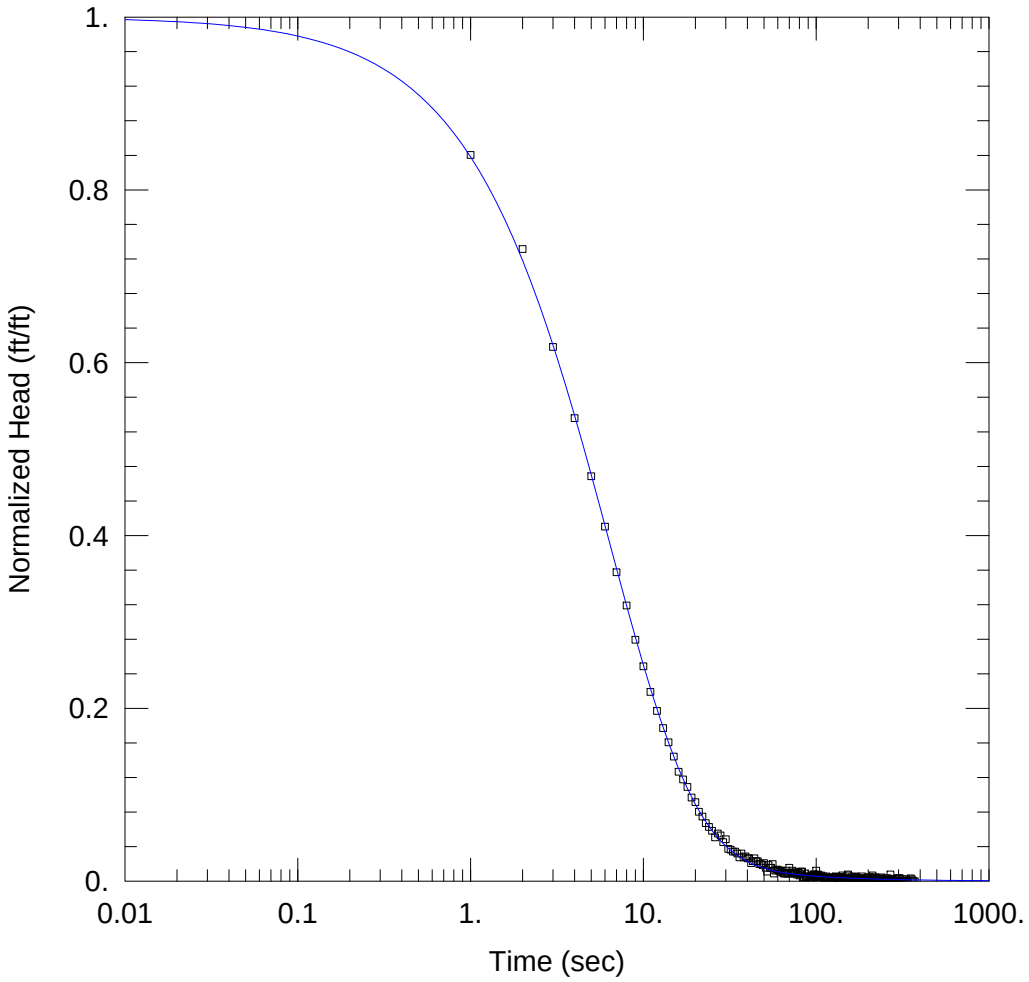
Saturated Thickness: 6. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-22)

Initial Displacement: 0.909 ft
Total Well Penetration Depth: 6. ft
Casing Radius: 0.083 ft
Static Water Column Height: 23.92 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 17. ft/day
Solution Method: Bouwer-Rice
y0 = 0.8359 ft



MW-13-22 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-22
Test Date: 12/18/13

AQUIFER DATA

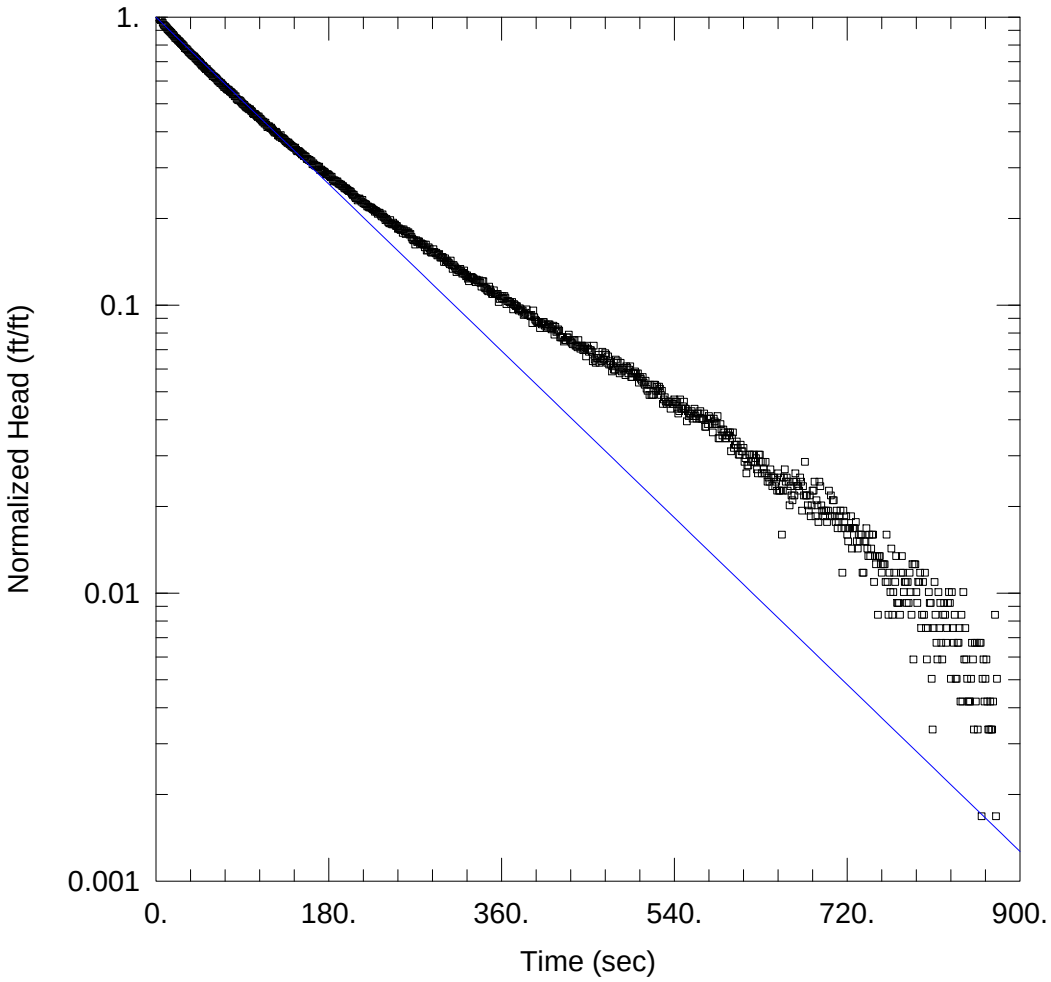
Saturated Thickness: 6. ft

WELL DATA (MW-13-22)

Initial Displacement: 0.909 ft
Total Well Penetration Depth: 6. ft
Casing Radius: 0.083 ft
Static Water Column Height: 23.92 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 49.09 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 1.454E-7 ft^{-1}



MW-13-34 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-34
Test Date: 12/18/13

AQUIFER DATA

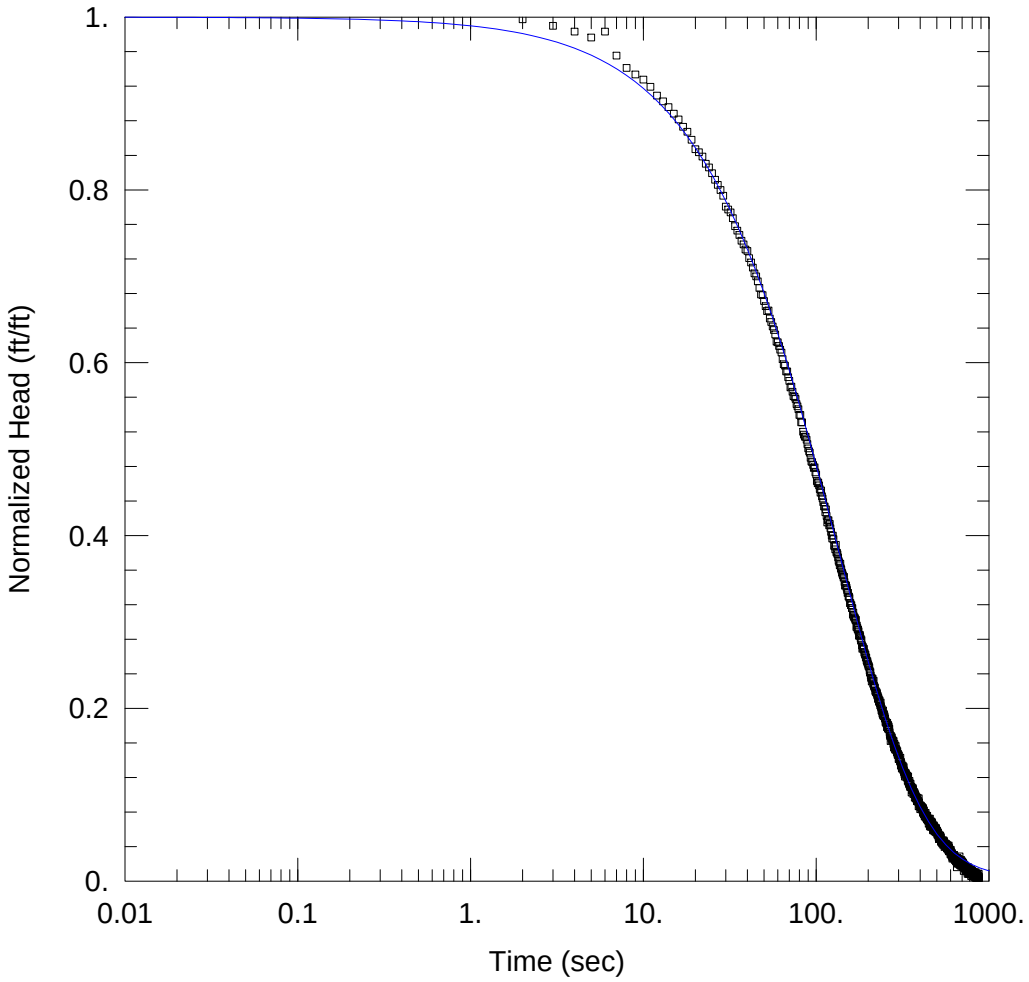
Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-34)

Initial Displacement: 1.19 ft
Total Well Penetration Depth: 5. ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.5 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 0.9432 ft/day
Solution Method: Bouwer-Rice
y0 = 1.189 ft



MW-13-34 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-34
Test Date: 12/18/13

AQUIFER DATA

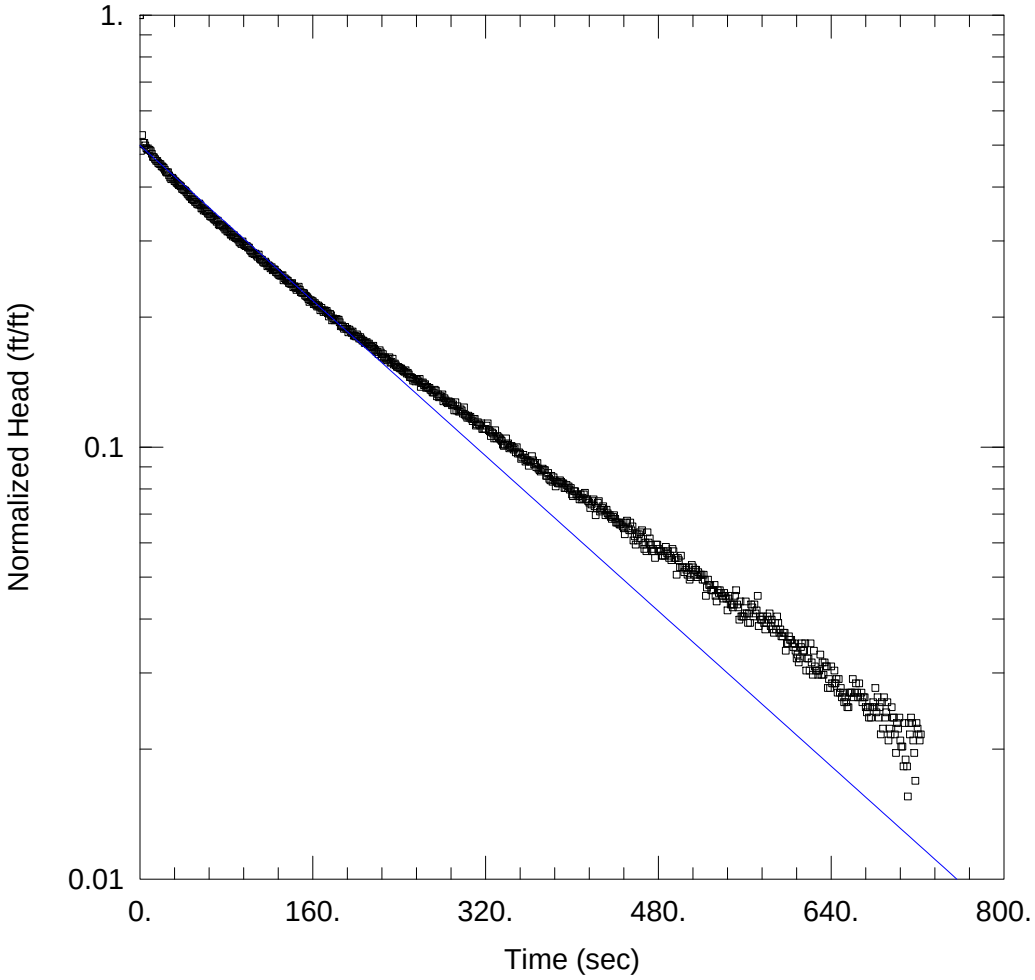
Saturated Thickness: 5. ft

WELL DATA (MW-13-34)

Initial Displacement: 1.19 ft
Total Well Penetration Depth: 5. ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.5 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 3.752 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 1.54E-9 ft^{-1}



MW-13-34 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-34
Test Date: 12/18/13

AQUIFER DATA

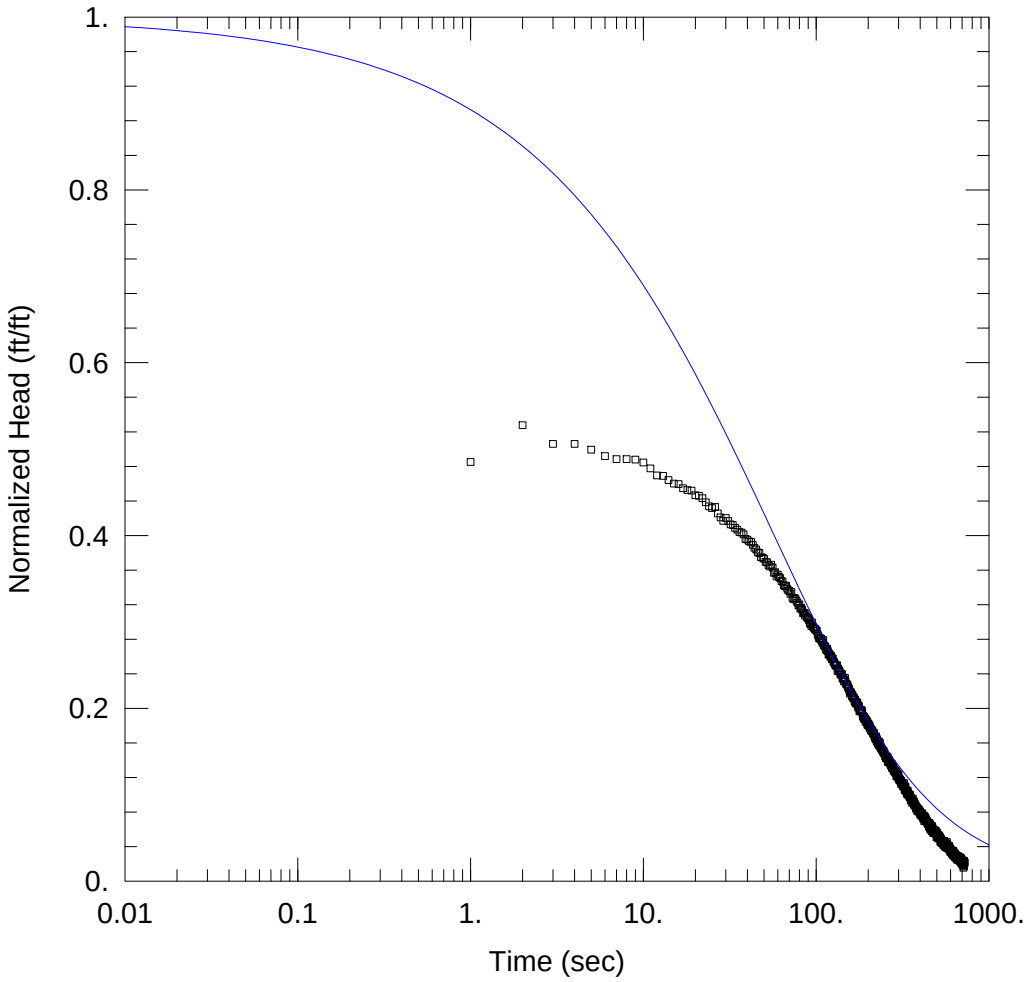
Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-34)

Initial Displacement: 1.48 ft
Total Well Penetration Depth: 5. ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.5 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 0.6581 ft/day
Solution Method: Bouwer-Rice
y0 = 0.7389 ft



MW-13-34 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-34
Test Date: 12/18/13

AQUIFER DATA

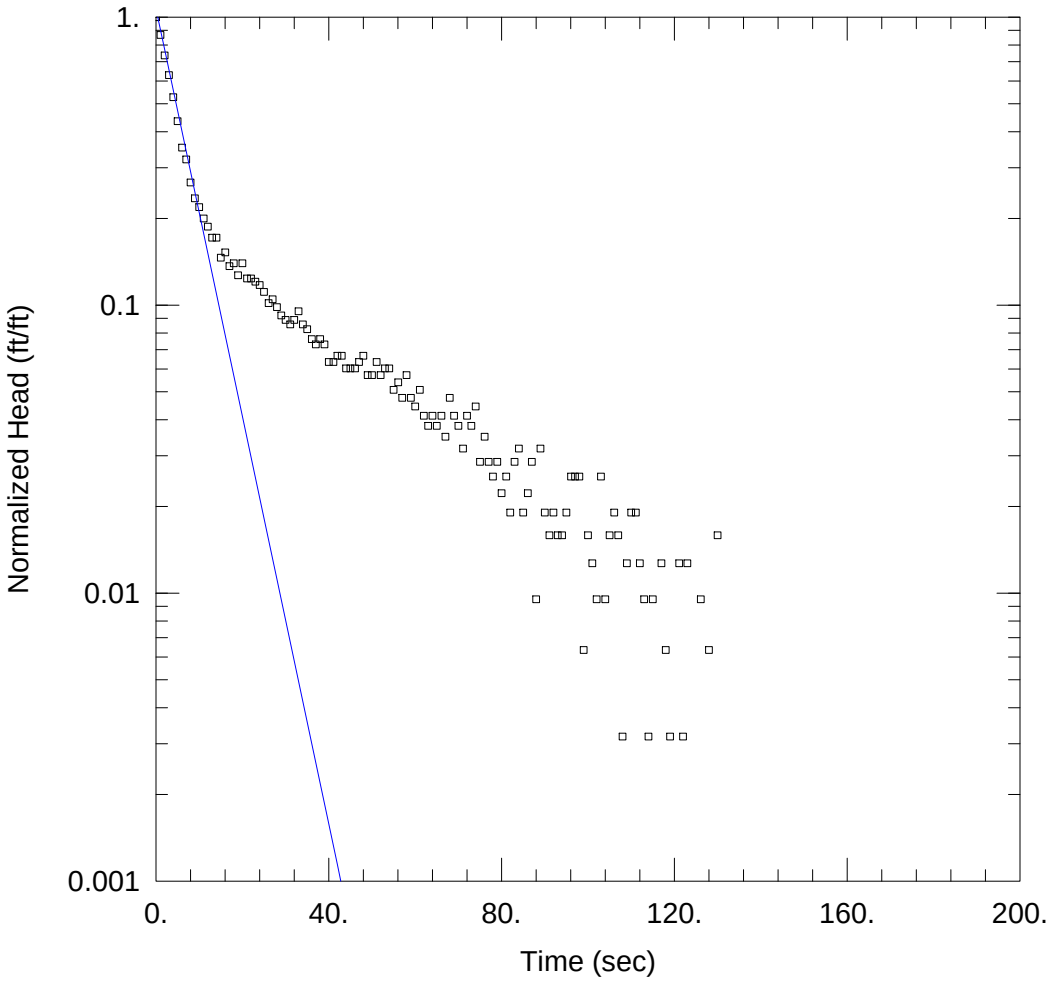
Saturated Thickness: 5. ft

WELL DATA (MW-13-34)

Initial Displacement: 1.48 ft
Total Well Penetration Depth: 5. ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.5 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 0.743 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 0.007871 ft^{-1}



MW-13-42 SLUG-OUT TEST #2

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-42
Test Date: 12/16/13

AQUIFER DATA

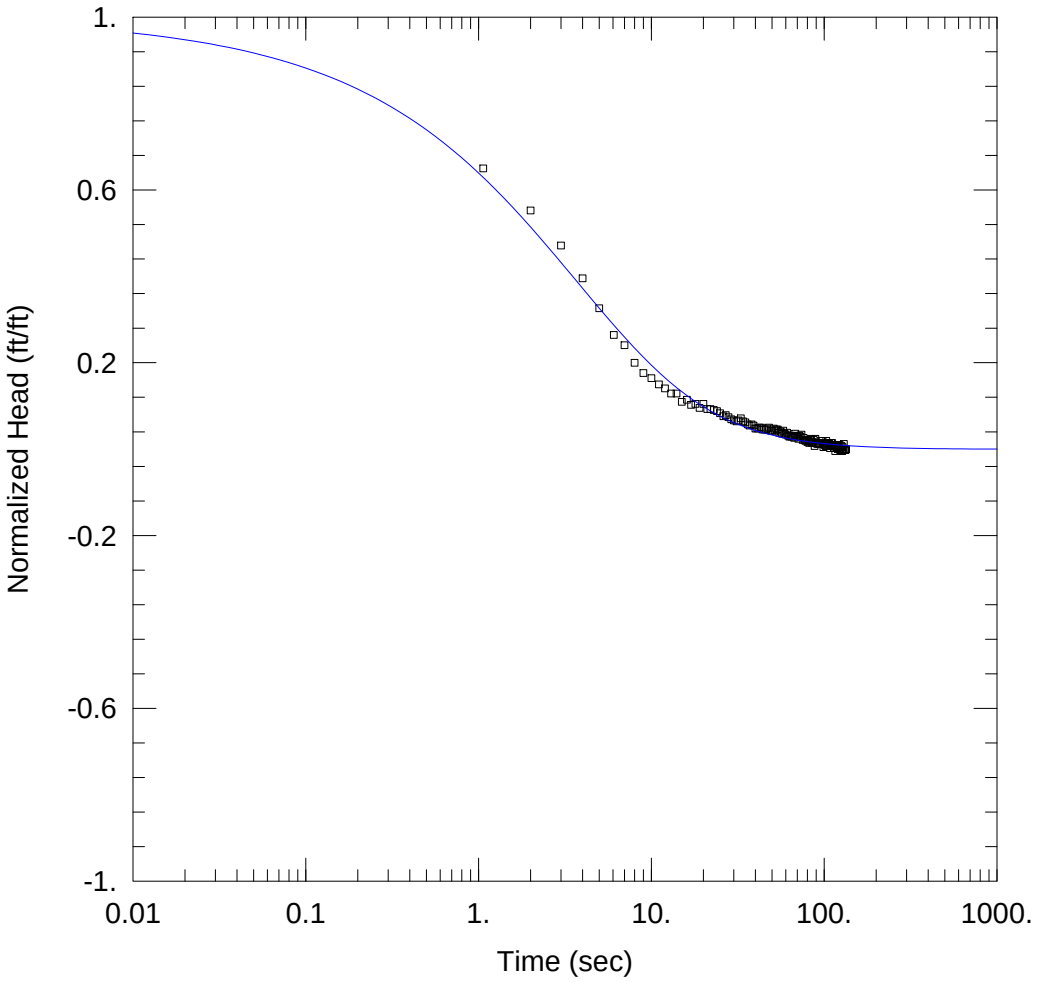
Saturated Thickness: 3.07 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-42)

Initial Displacement: 0.315 ft
Total Well Penetration Depth: 3.07 ft
Casing Radius: 0.083 ft
Static Water Column Height: 4.19 ft
Screen Length: 3.07 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 27.56 ft/day
Solution Method: Bouwer-Rice
y0 = 0.3373 ft



MW-13-42 SLUG-OUT TEST #2

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-42
Test Date: 12/16/13

AQUIFER DATA

Saturated Thickness: 3.07 ft

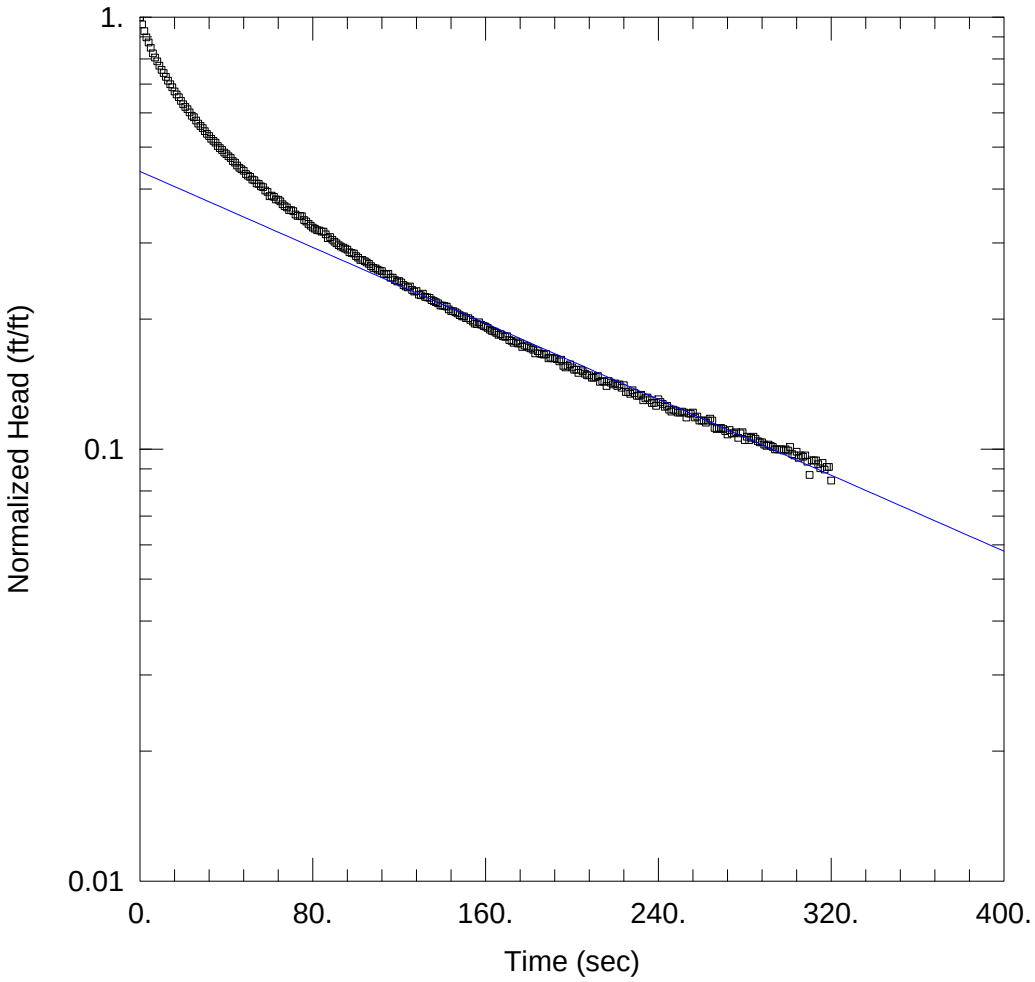
WELL DATA (MW-13-42)

Initial Displacement: 0.42 ft
Total Well Penetration Depth: 3.07 ft
Casing Radius: 0.083 ft
Static Water Column Height: 4.19 ft
Screen Length: 3.07 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 26.6 ft/day
Kz/Kr = 0.2188
Ss = 0.006289 ft^{-1}



MW-13-43 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-43
Test Date: 12/16/13

AQUIFER DATA

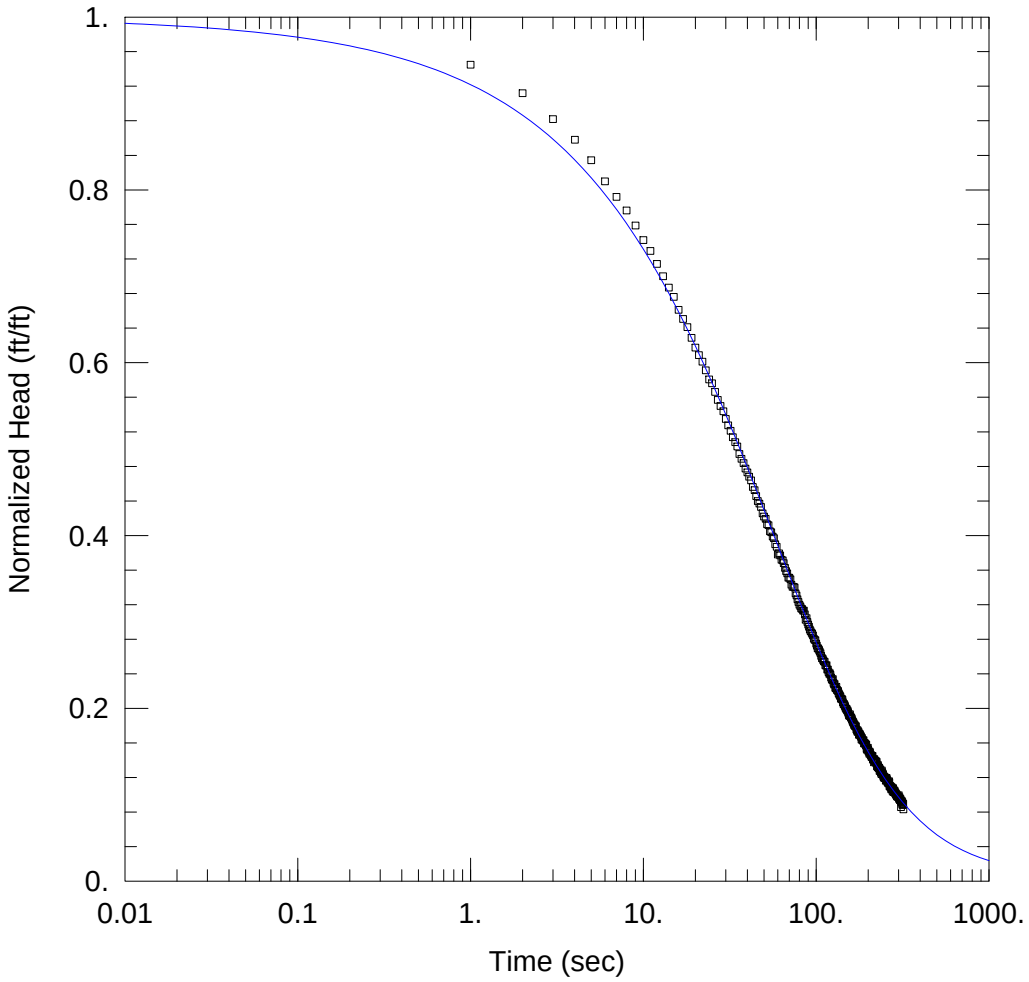
Saturated Thickness: 10.11 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-43)

Initial Displacement: 1.572 ft
Total Well Penetration Depth: 10.11 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10. ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 0.7625 ft/day
Solution Method: Bouwer-Rice
y0 = 0.6907 ft



MW-13-43 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-43
Test Date: 12/16/13

AQUIFER DATA

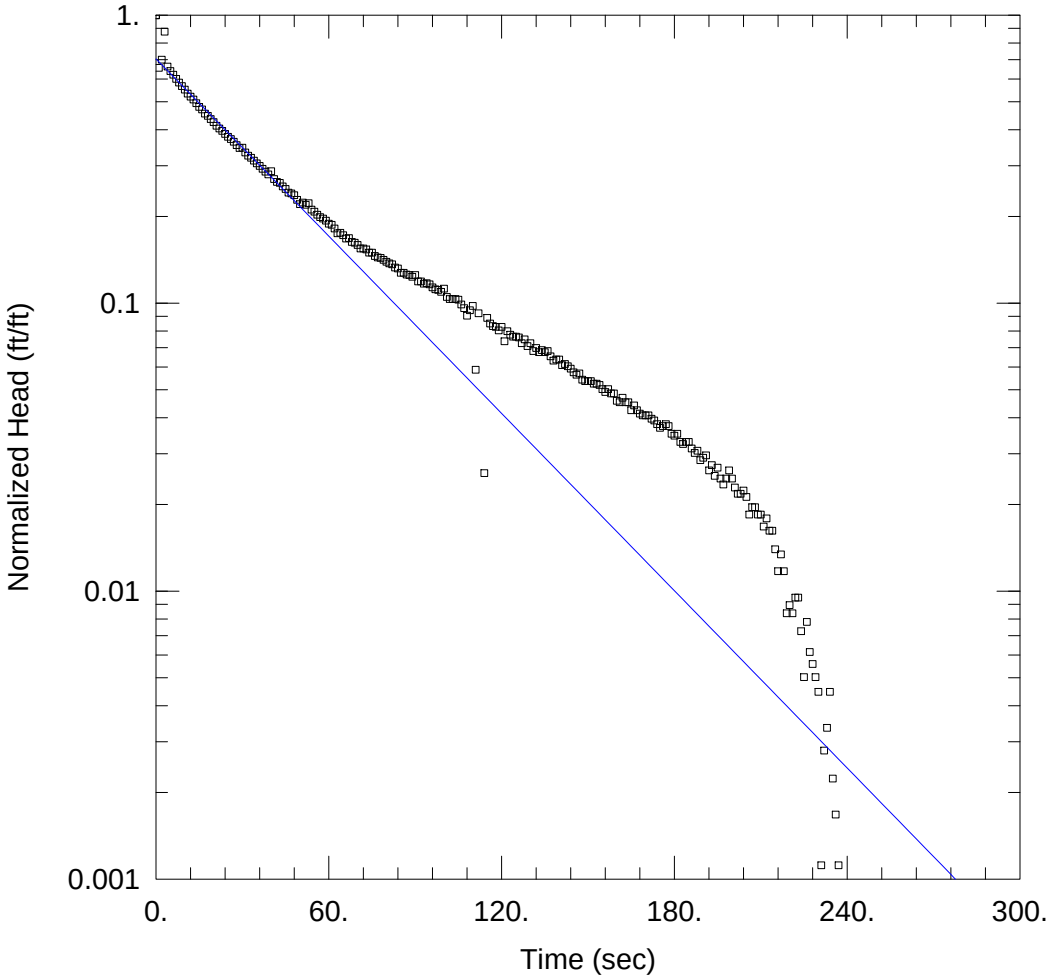
Saturated Thickness: 5. ft

WELL DATA (MW-13-43)

Initial Displacement: 1.6 ft
Total Well Penetration Depth: 10.11 ft
Casing Radius: 0.083 ft
Static Water Column Height: 10. ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 1.449 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 0.001802 ft^{-1}



MW-13-45 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-45
Test Date: 12/16/13

AQUIFER DATA

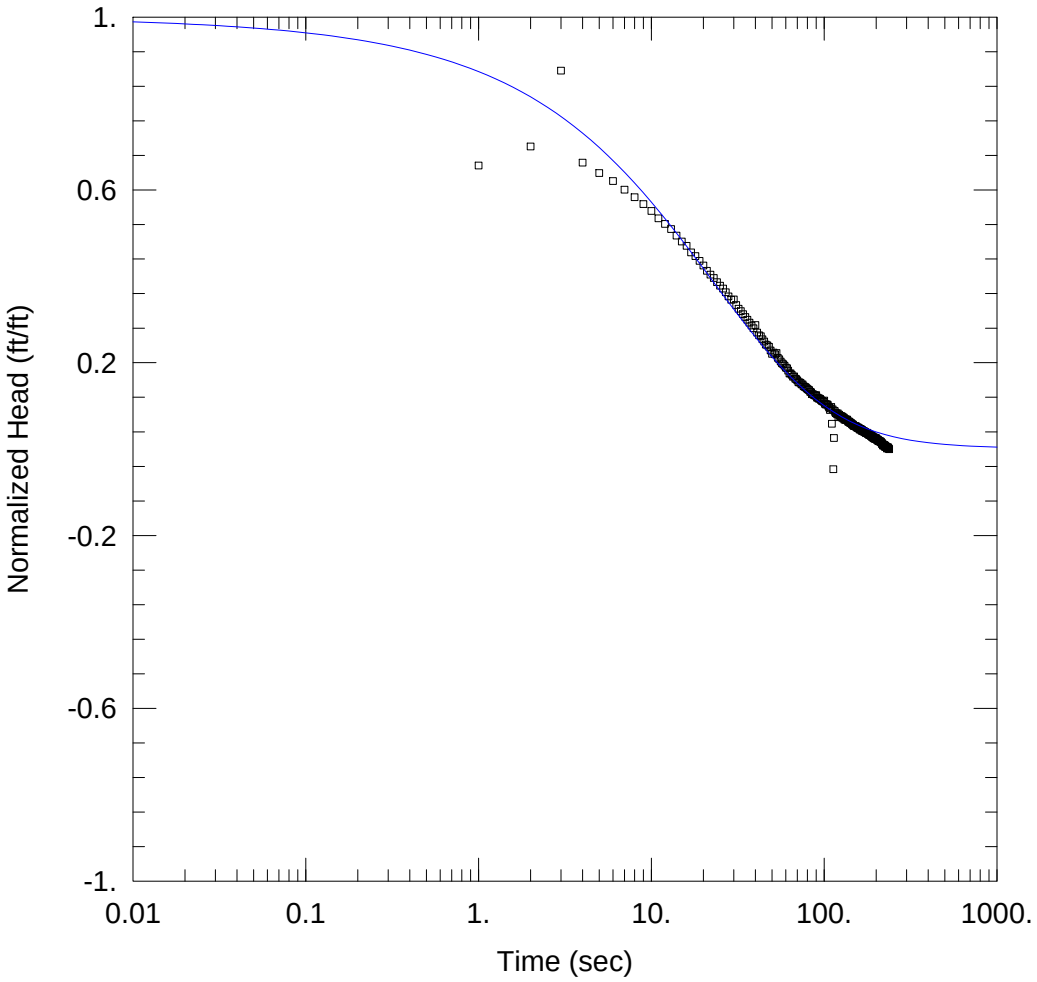
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-45)

Initial Displacement: 1.79 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.3 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 3.472 ft/day
Solution Method: Bouwer-Rice
y0 = 1.262 ft



MW-13-45 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-45
Test Date: 12/16/13

AQUIFER DATA

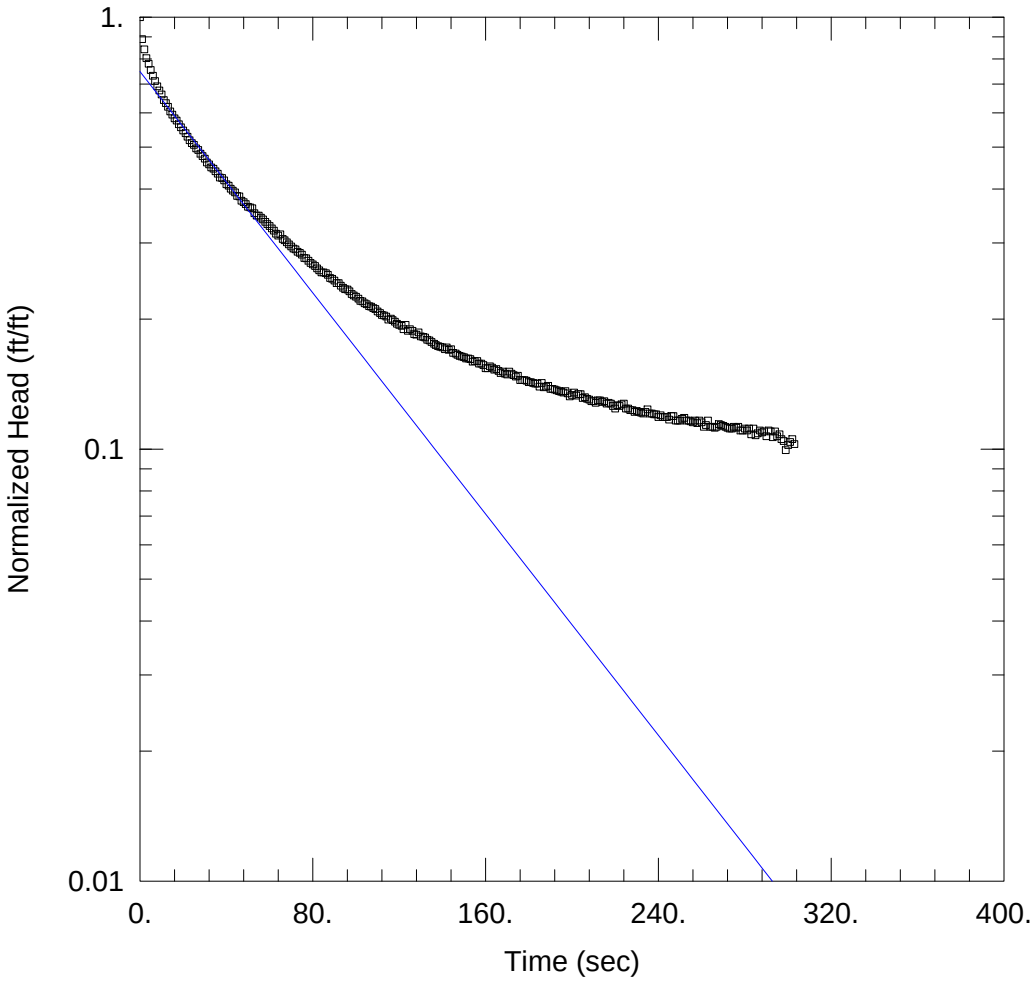
Saturated Thickness: 9. ft

WELL DATA (MW-13-45)

Initial Displacement: 1.79 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.3 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 3.84 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 0.001438 ft^{-1}



MW-13-45 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-45
Test Date: 12/16/13

AQUIFER DATA

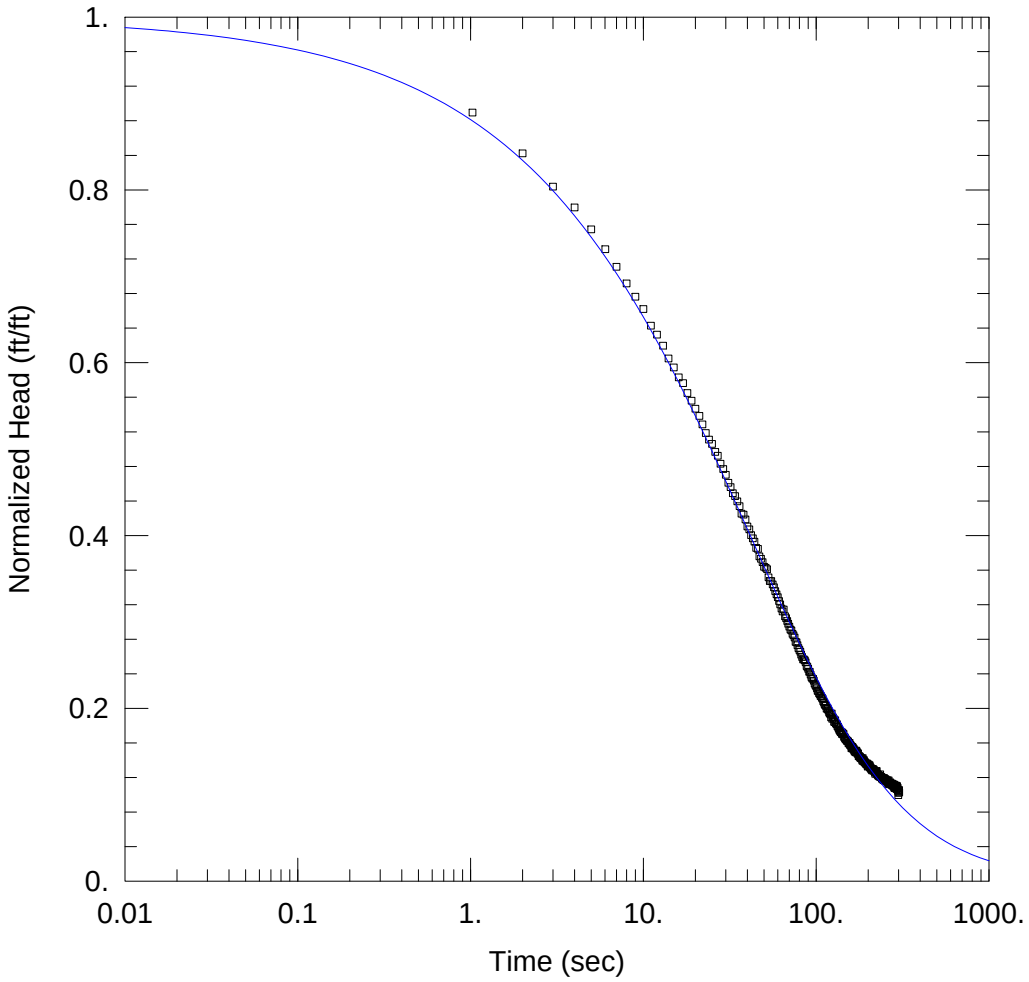
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-45)

Initial Displacement: 1.82 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.33 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 2.166 ft/day
y0 = 1.361 ft



MW-13-45 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-45
Test Date: 12/16/13

AQUIFER DATA

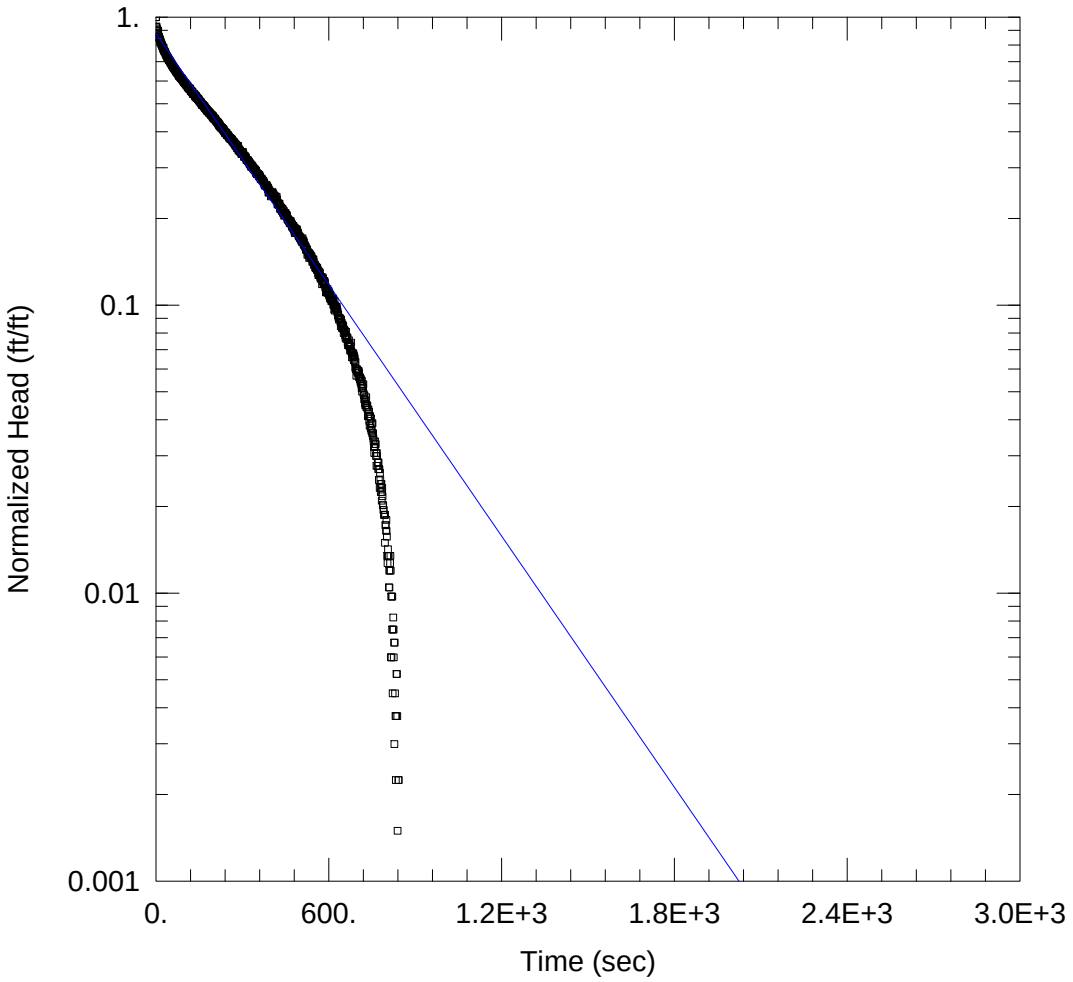
Saturated Thickness: 9. ft

WELL DATA (MW-13-45)

Initial Displacement: 1.82 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.33 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 1.14 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 0.006078 ft^{-1}



MW-13-46 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-46
Test Date: 12/18/13

AQUIFER DATA

Saturated Thickness: 6.5 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-46)

Initial Displacement: 1.337 ft
Total Well Penetration Depth: 6.5 ft
Casing Radius: 0.083 ft

Static Water Column Height: 8.48 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

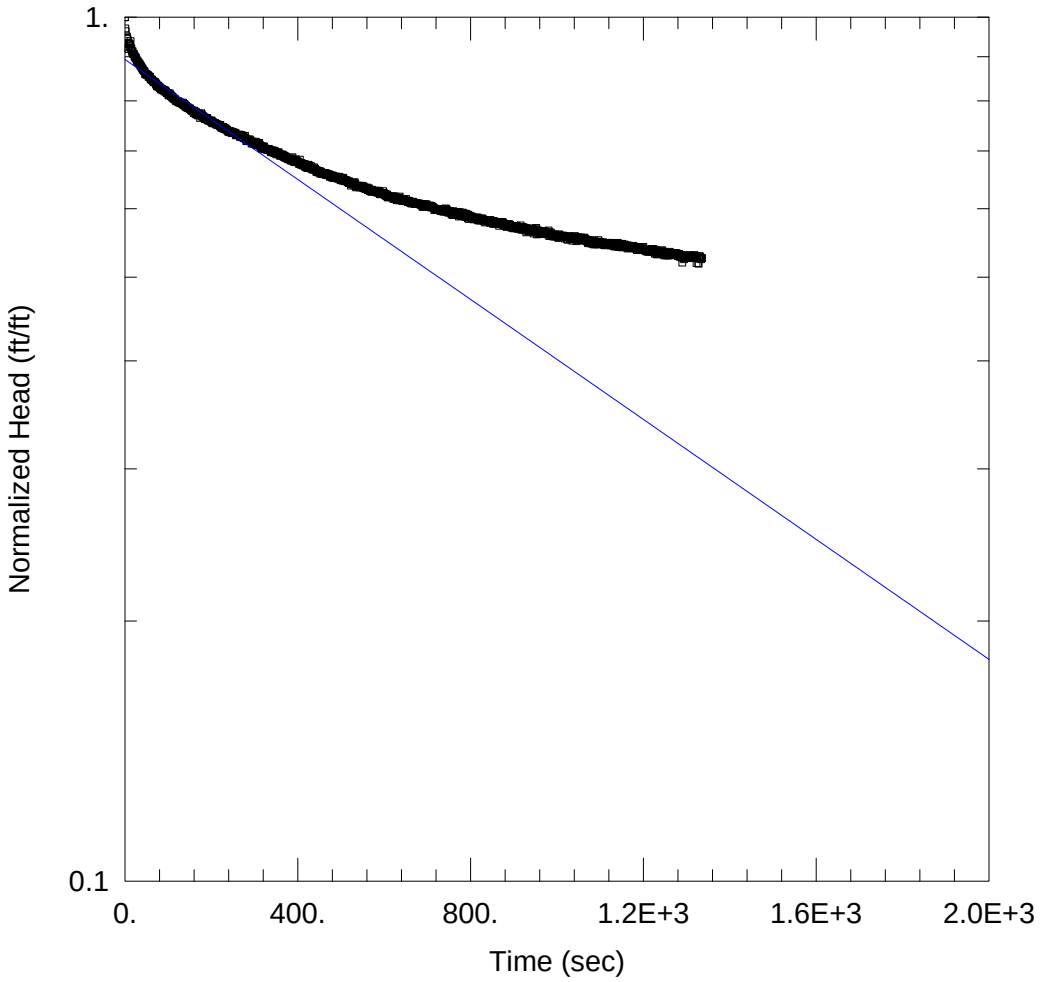
SOLUTION

Aquifer Model: Confined

K = 0.4561 ft/day

Solution Method: Bouwer-Rice

y0 = 1.172 ft



MW-13-46 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-46
Test Date: 12/18/13

AQUIFER DATA

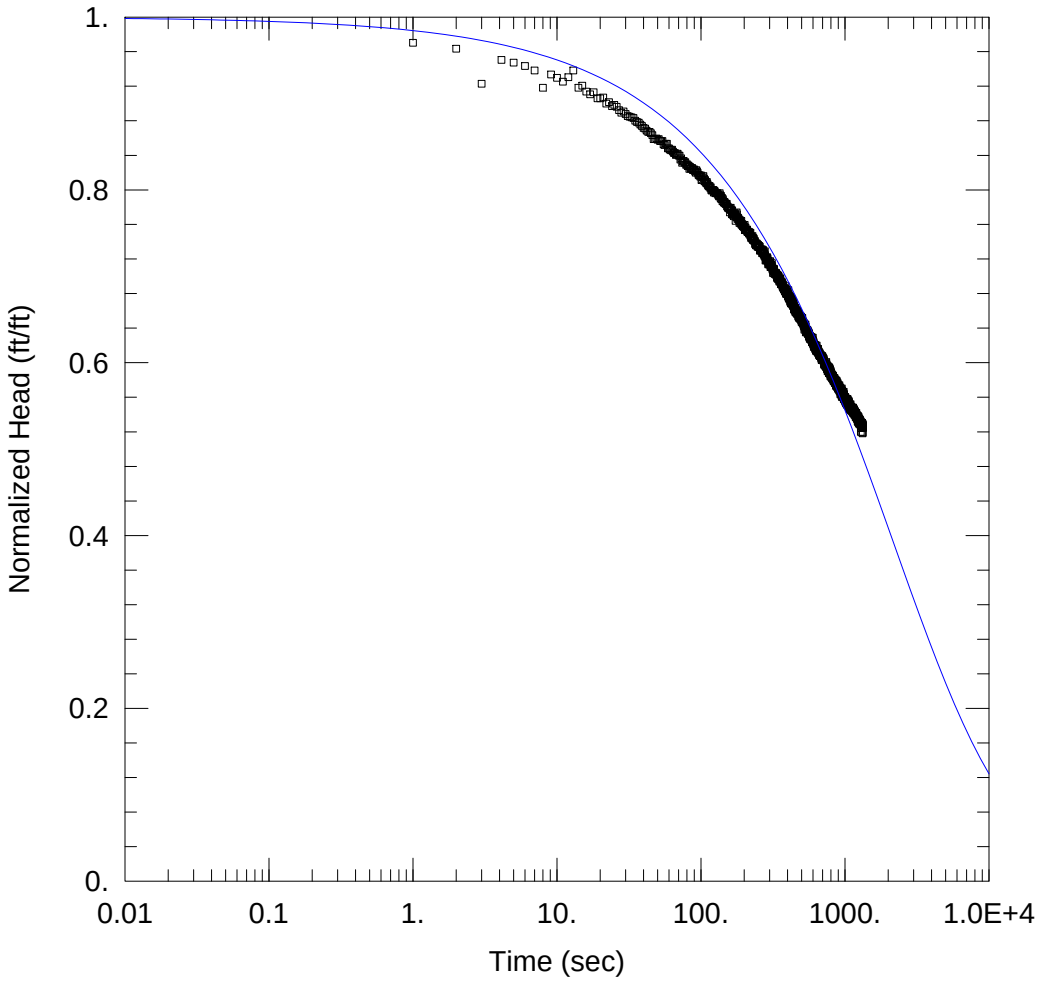
Saturated Thickness: 6.5 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-46)

Initial Displacement: 1.31 ft
Total Well Penetration Depth: 6.5 ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.48 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 0.1089 ft/day
Solution Method: Bouwer-Rice
y0 = 1.17 ft



MW-13-46 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-46
Test Date: 12/17/13

AQUIFER DATA

Saturated Thickness: 6.5 ft

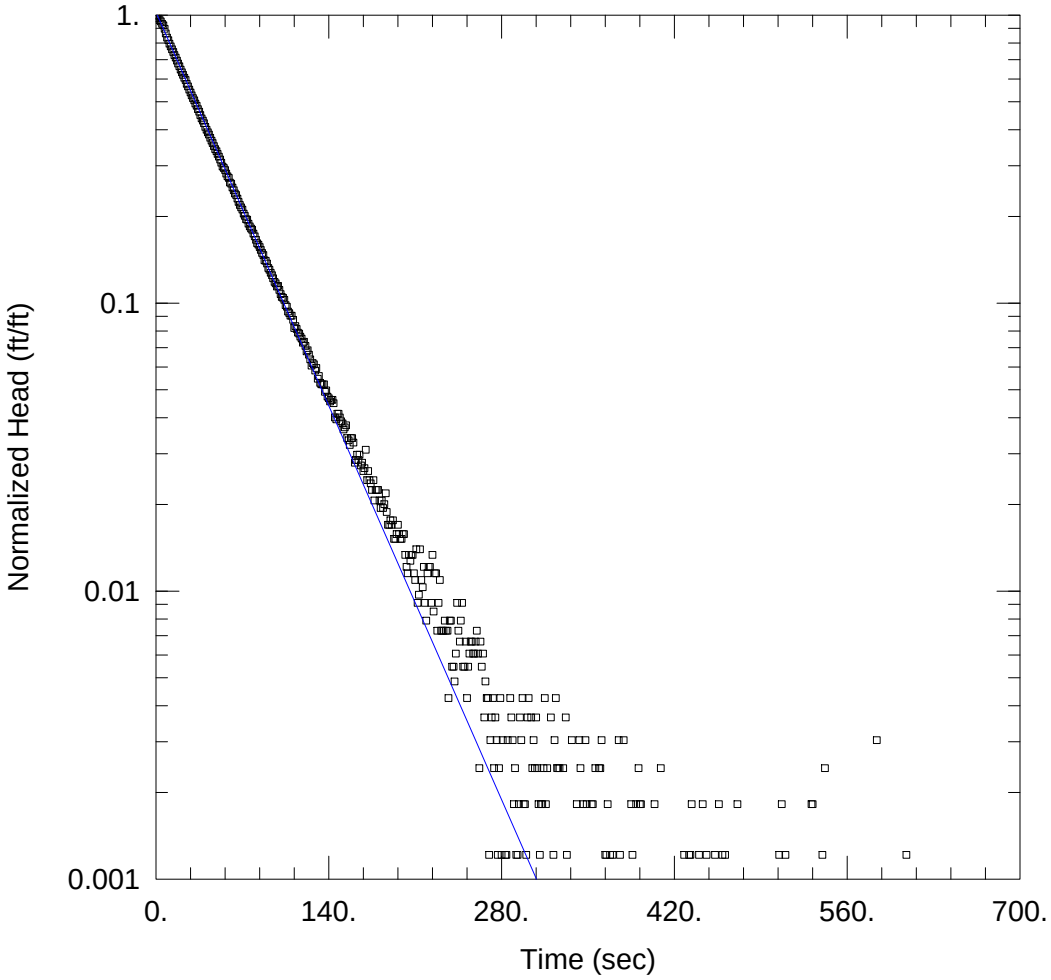
WELL DATA (MW-13-46)

Initial Displacement: 1.31 ft
Total Well Penetration Depth: 6.5 ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.48 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.0265 ft/day
Kz/Kr = 1.
Ss = 0.004343 ft^{-1}



MW-13-47 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-47
Test Date: 12/18/13

AQUIFER DATA

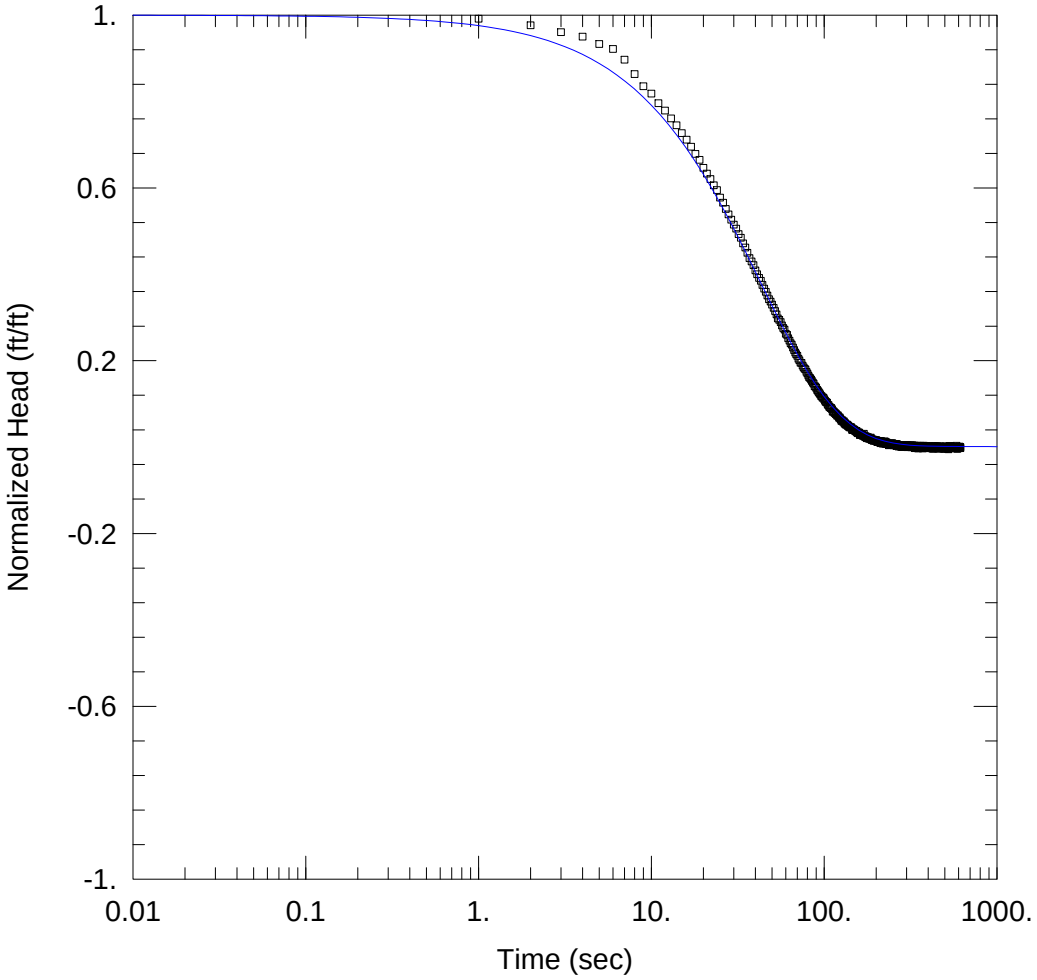
Saturated Thickness: 37.79 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-47)

Initial Displacement: 1.647 ft
Total Well Penetration Depth: 38. ft
Casing Radius: 0.083 ft
Static Water Column Height: 44.74 ft
Screen Length: 10. ft
Well Radius: 0.125 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Bouwer-Rice
K = 2.704 ft/day
y0 = 1.689 ft



MW-13-47 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-47
Test Date: 12/18/13

AQUIFER DATA

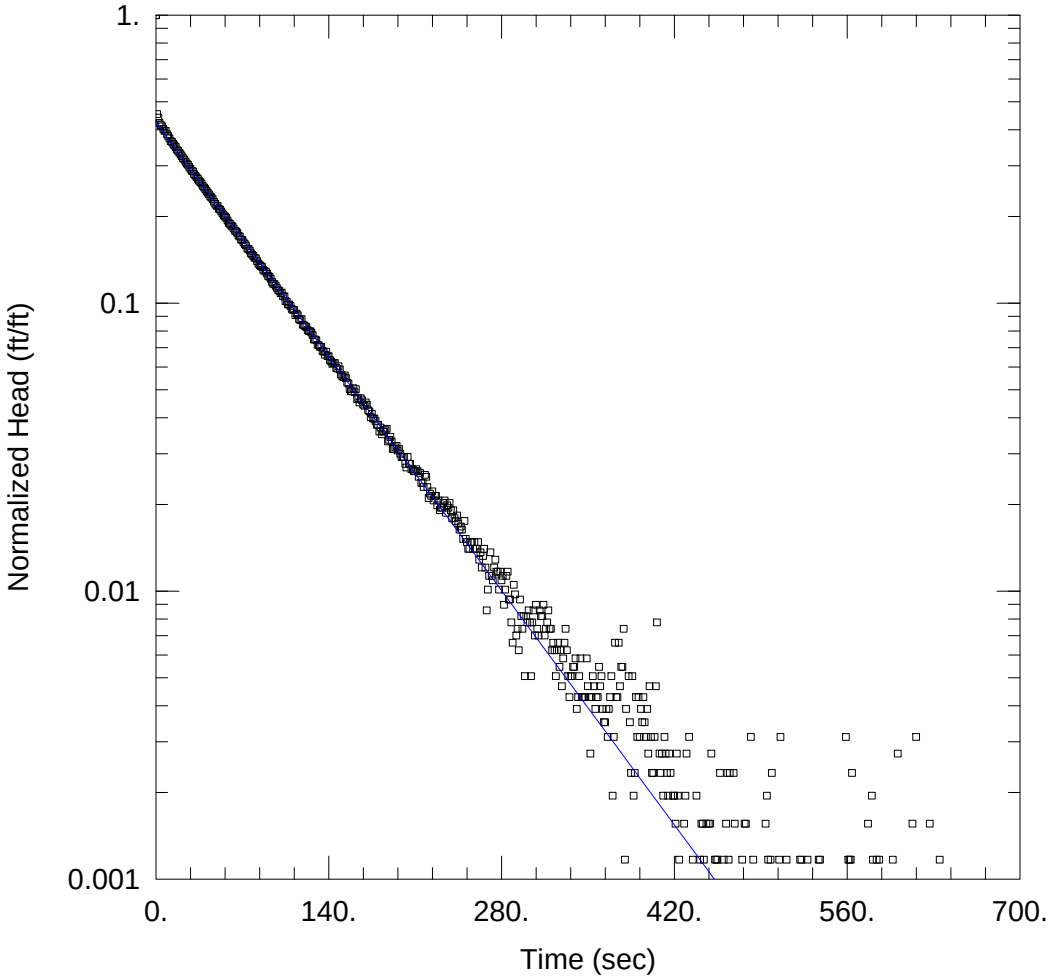
Saturated Thickness: 37.79 ft

WELL DATA (MW-13-47)

Initial Displacement: 1.647 ft
Total Well Penetration Depth: 38. ft
Casing Radius: 0.083 ft
Static Water Column Height: 44.74 ft
Screen Length: 10. ft
Well Radius: 0.125 ft

SOLUTION

Aquifer Model: Confined
Kr = 4.179 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 2.646E-12 ft^{-1}



MW-13-47 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-47
Test Date: 12/18/13

AQUIFER DATA

Saturated Thickness: 37.79 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-47)

Initial Displacement: 2.567 ft
Total Well Penetration Depth: 38. ft
Casing Radius: 0.083 ft

Static Water Column Height: 44.74 ft
Screen Length: 10. ft
Well Radius: 0.125 ft
Gravel Pack Porosity: 0.

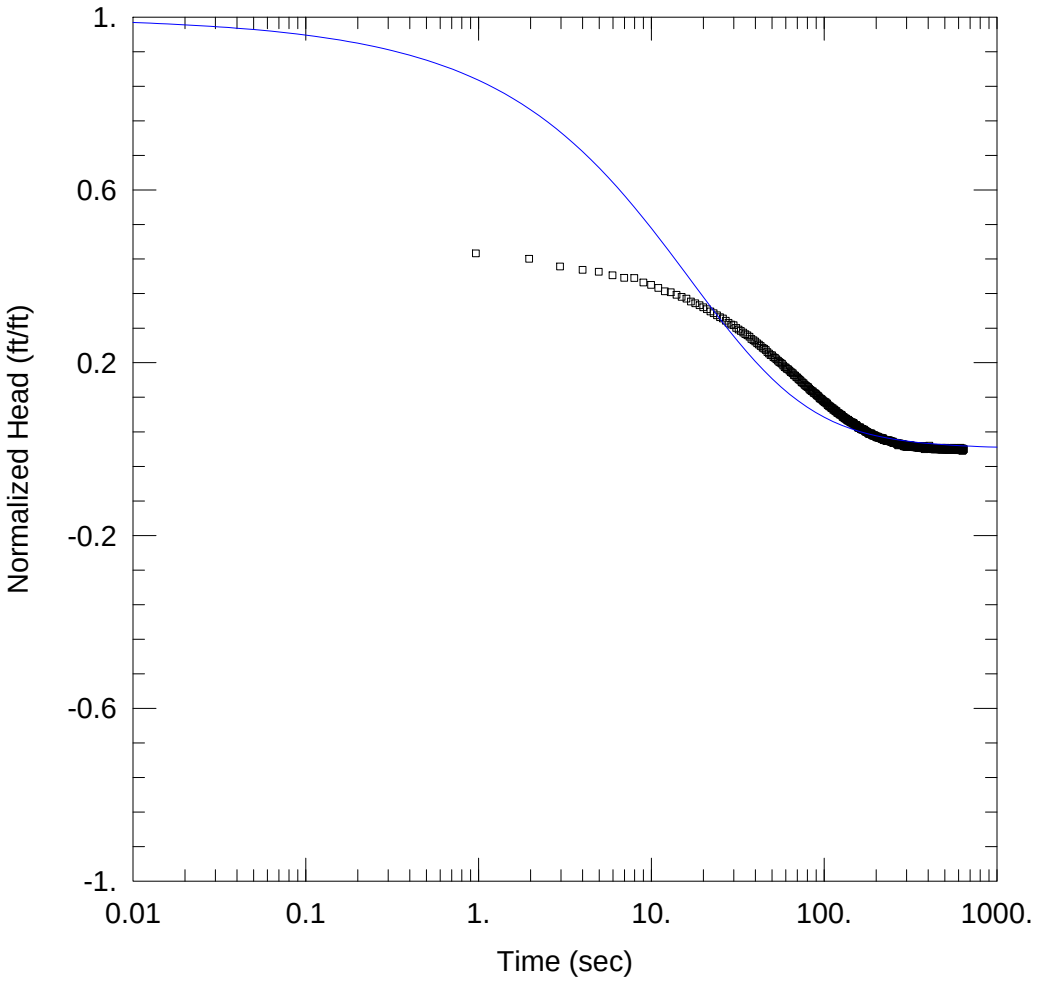
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 1.608 ft/day

y0 = 1.091 ft



MW-13-47 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-47
Test Date: 12/18/13

AQUIFER DATA

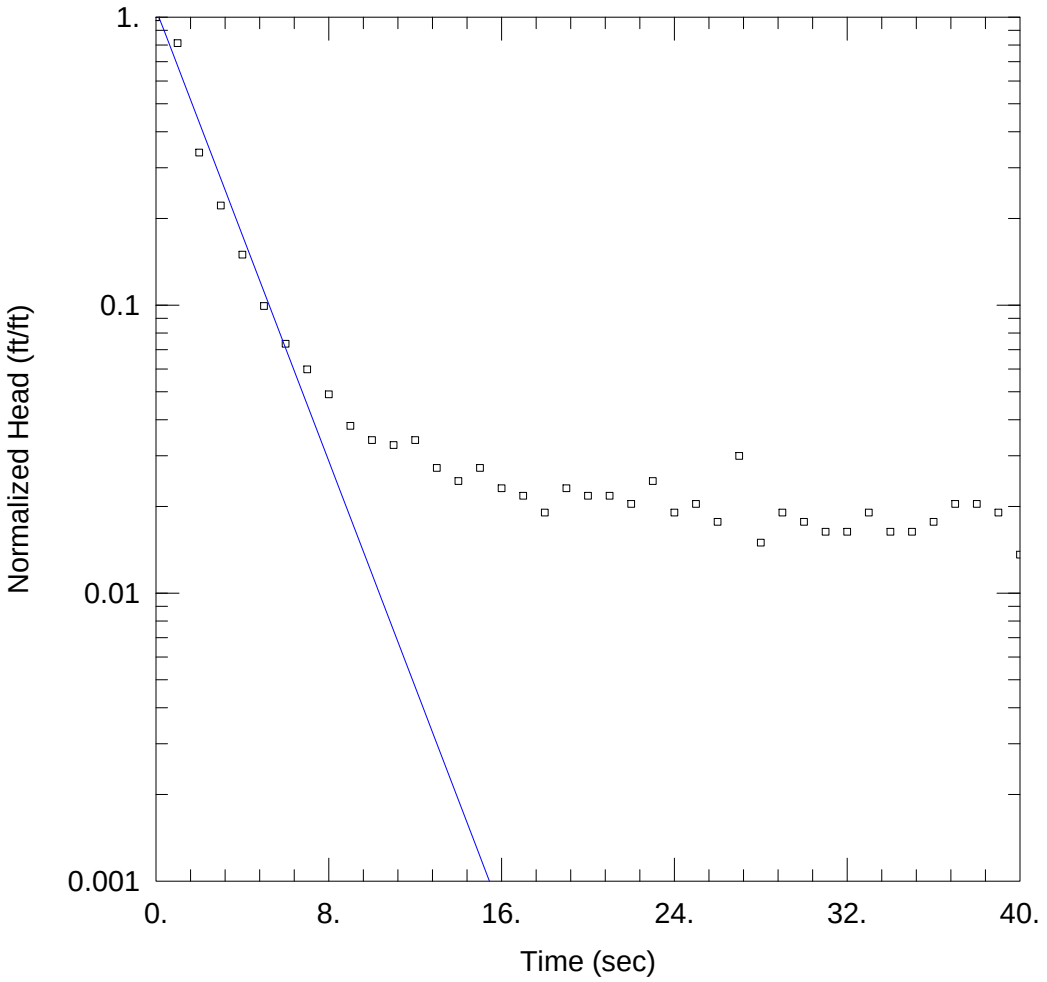
Saturated Thickness: 37.79 ft

WELL DATA (MW-13-47)

Initial Displacement: 2.567 ft
Total Well Penetration Depth: 38. ft
Casing Radius: 0.083 ft
Static Water Column Height: 44.74 ft
Screen Length: 10. ft
Well Radius: 0.125 ft
Gravel Pack Porosity: 0.

SOLUTION

Aquifer Model: Confined
Kr = 2.843 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 0.002646 ft^{-1}



MW-13-48 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-48
Test Date: 12/17/13

AQUIFER DATA

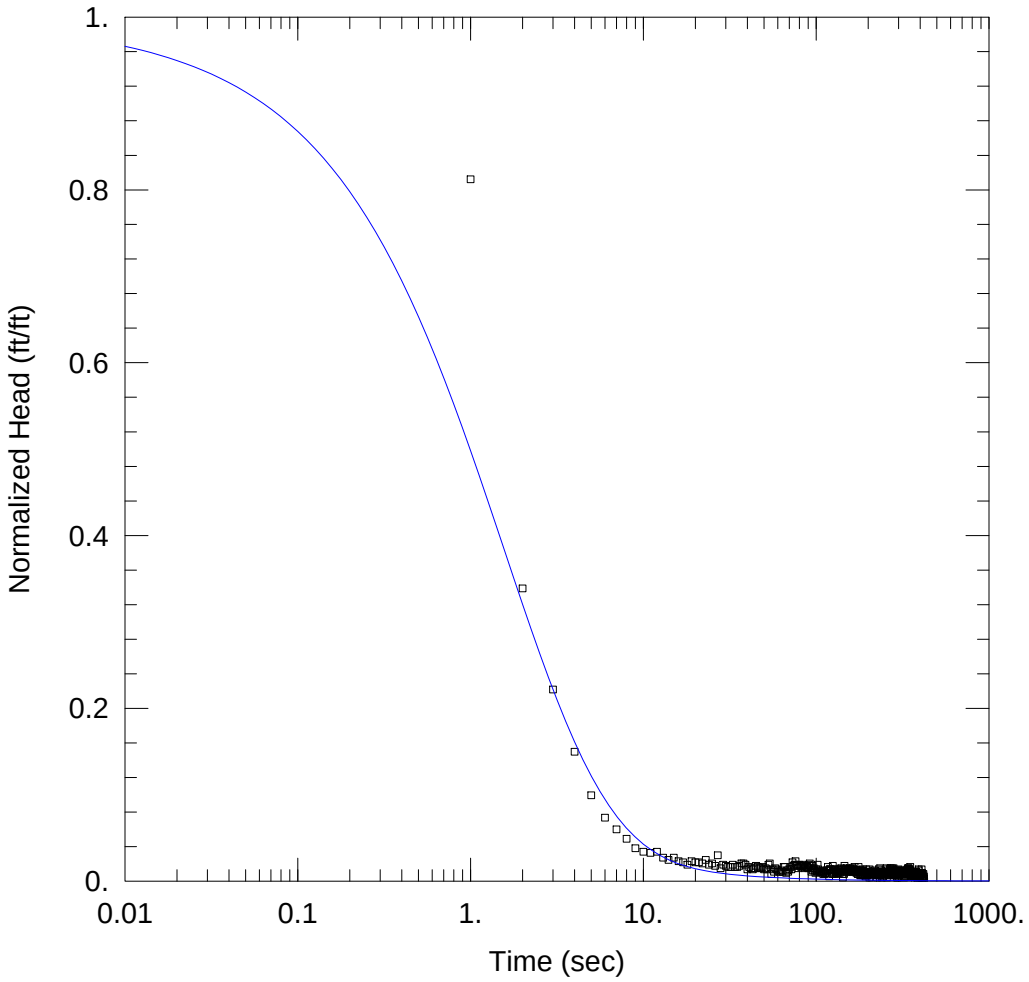
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-48)

Initial Displacement: 0.735 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.95 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 66.34 ft/day
Solution Method: Bouwer-Rice
y0 = 0.782 ft



MW-13-48 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-48
Test Date: 12/17/13

AQUIFER DATA

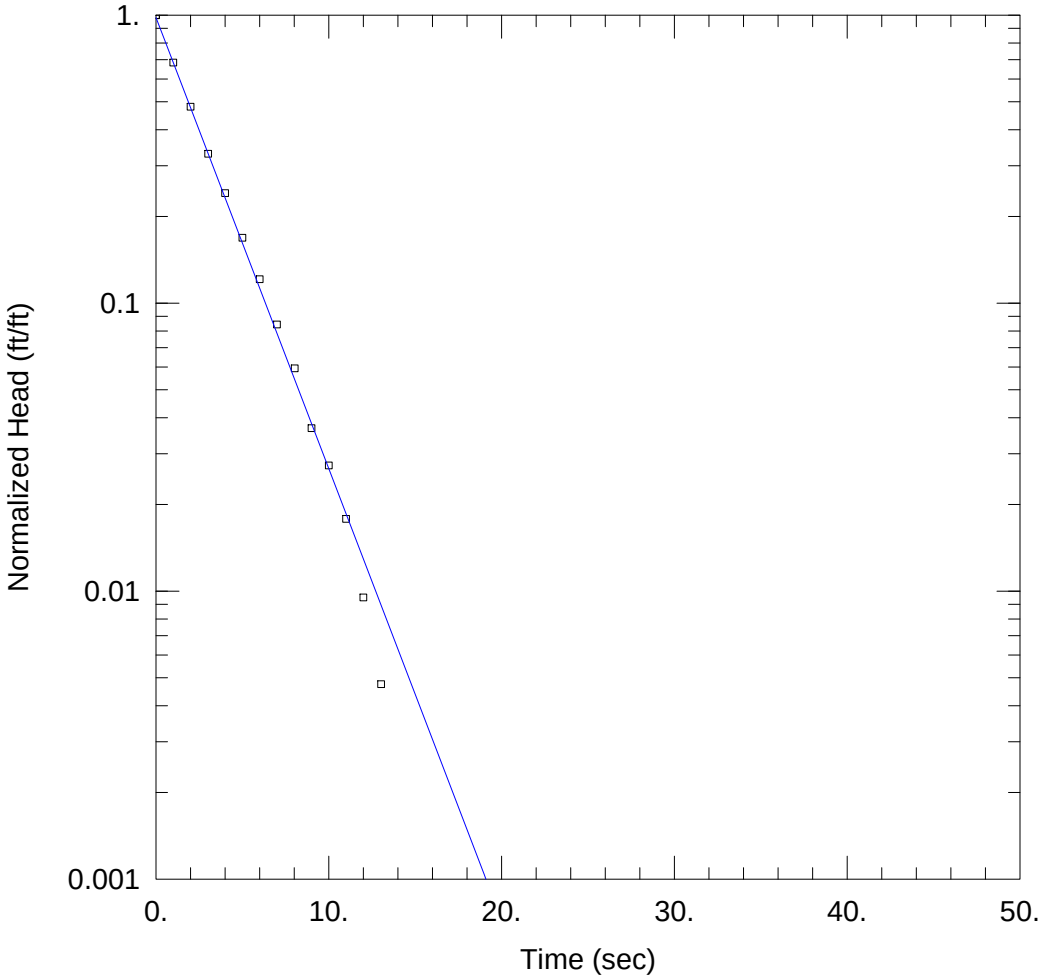
Saturated Thickness: 9. ft

WELL DATA (MW-13-48)

Initial Displacement: 0.735 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.95 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 73.47 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 0.0005239 ft^{-1}



MW-13-48 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-48
Test Date: 12/17/13

AQUIFER DATA

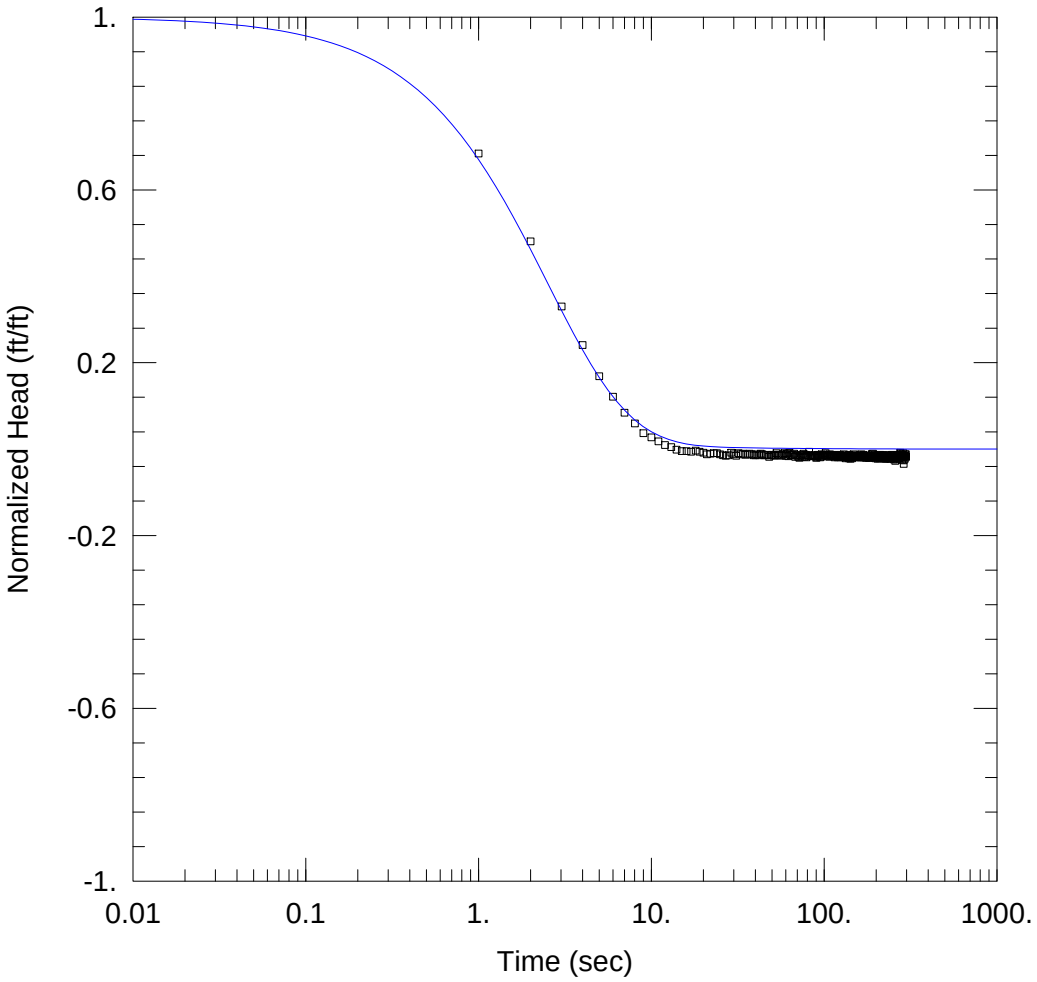
Saturated Thickness: 9. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-48)

Initial Displacement: 0.842 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.95 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 53.01 ft/day
Solution Method: Bouwer-Rice
y0 = 0.826 ft



MW-13-48 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-48
Test Date: 12/17/13

AQUIFER DATA

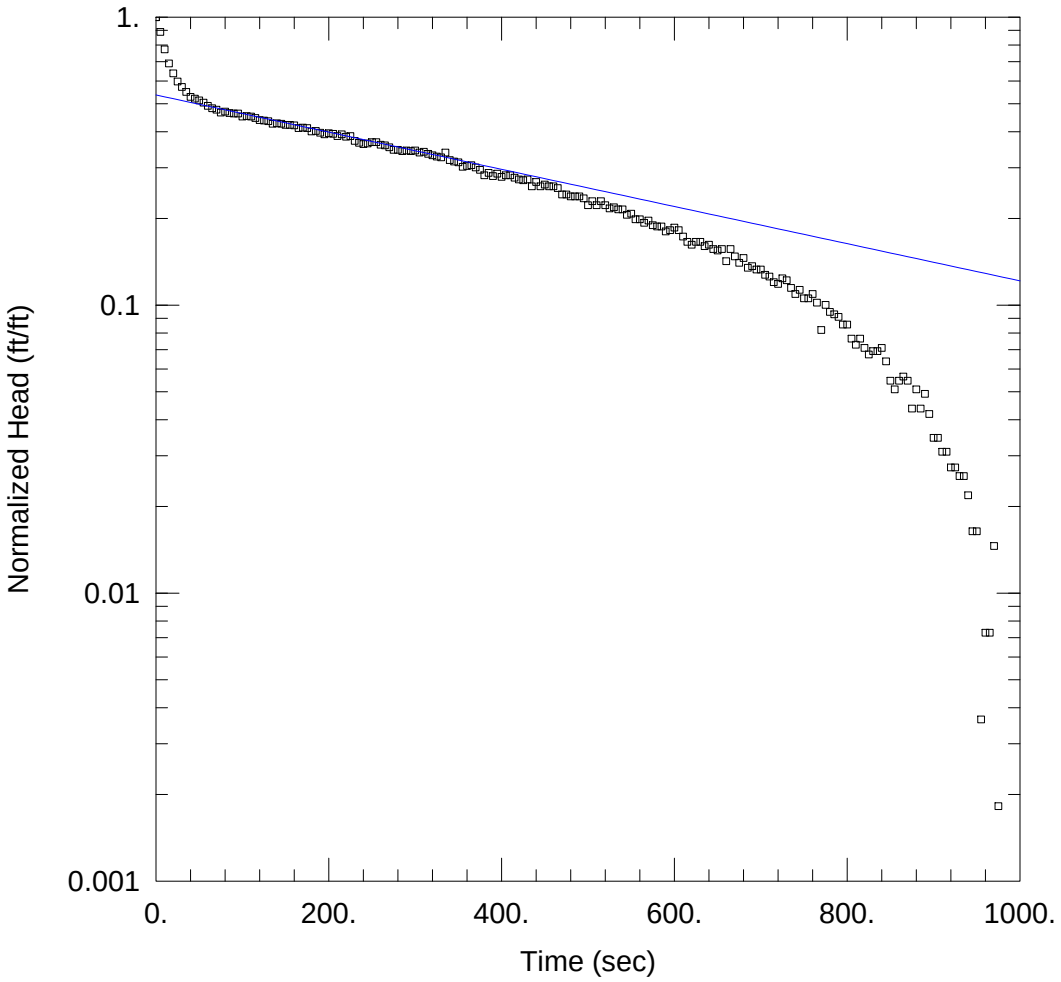
Saturated Thickness: 9. ft

WELL DATA (MW-13-48)

Initial Displacement: 0.842 ft
Total Well Penetration Depth: 9. ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.95 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 162.2 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 1.111E-11 ft^{-1}



MW-13-49 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-49
Test Date: 12/16/13

AQUIFER DATA

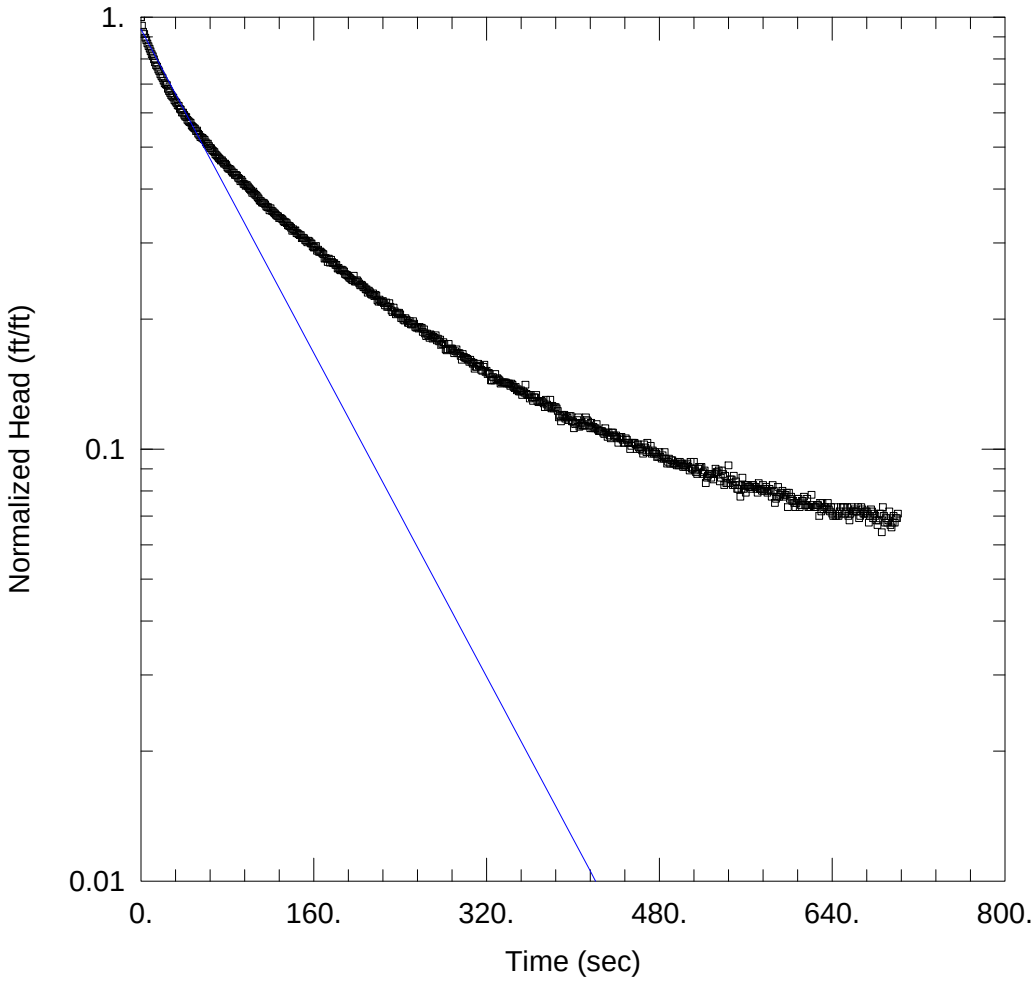
Saturated Thickness: 5. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-49)

Initial Displacement: 0.549 ft
Total Well Penetration Depth: 5. ft
Casing Radius: 0.083 ft
Static Water Column Height: 12.22 ft
Screen Length: 5. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 0.1892 ft/day
Solution Method: Bouwer-Rice
y0 = 0.2946 ft



MW-13-51 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-51
Test Date: 12/17/13

AQUIFER DATA

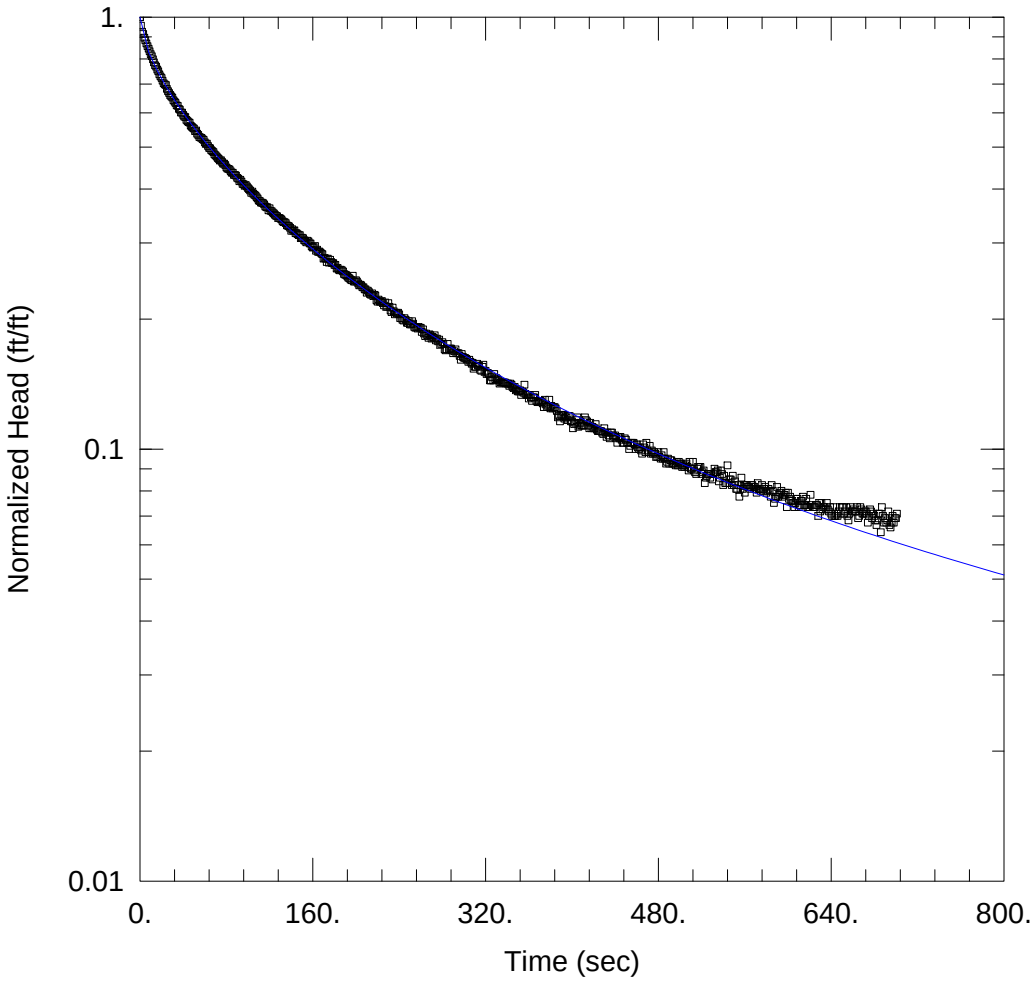
Saturated Thickness: 16.48 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-51)

Initial Displacement: 1.199 ft
Total Well Penetration Depth: 16.48 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.41 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 0.9656 ft/day
Solution Method: Bouwer-Rice
y0 = 1.124 ft



MW-13-51 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-51
Test Date: 12/17/13

AQUIFER DATA

Saturated Thickness: 16.48 ft

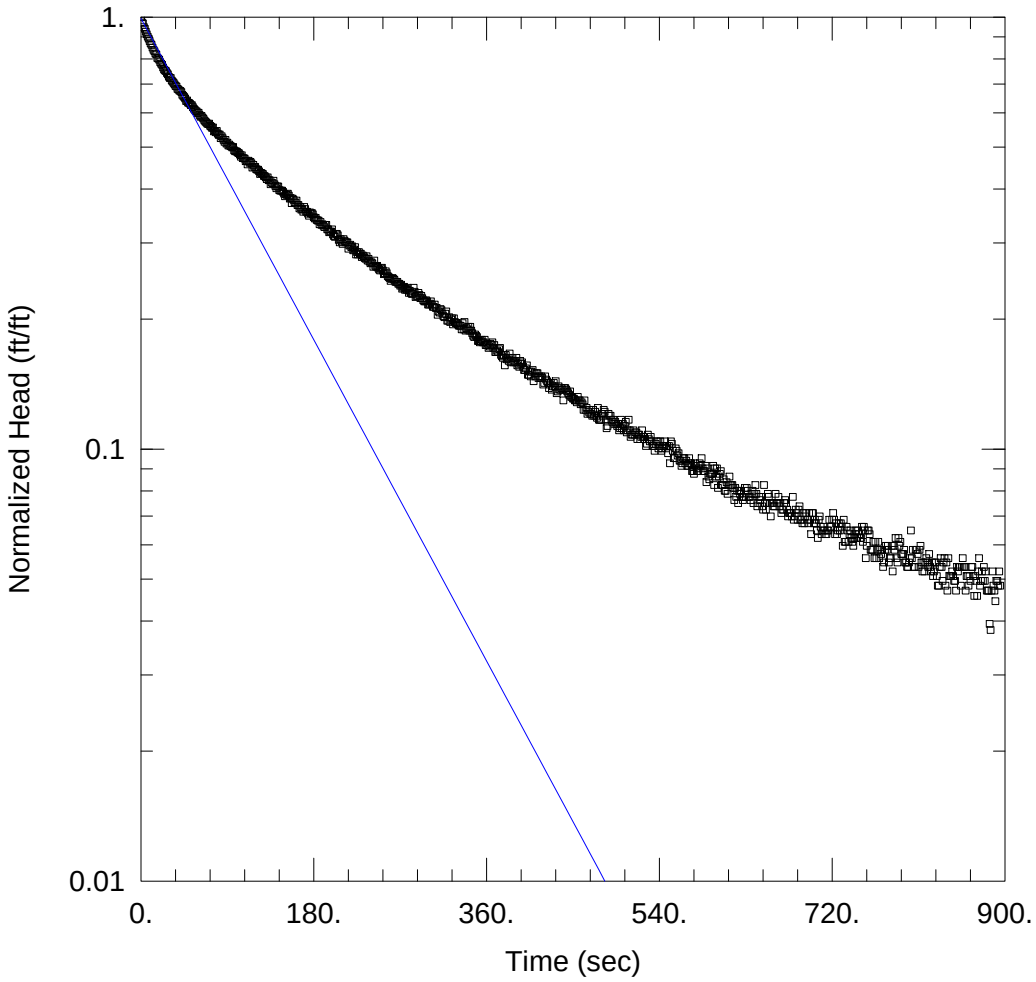
WELL DATA (MW-13-51)

Initial Displacement: 1.199 ft
Total Well Penetration Depth: 16.48 ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.41 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.4421 ft/day
Kz/Kr = 1.
Ss = 0.000646 ft^{-1}



MW-13-51 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-51
Test Date: 12/17/13

AQUIFER DATA

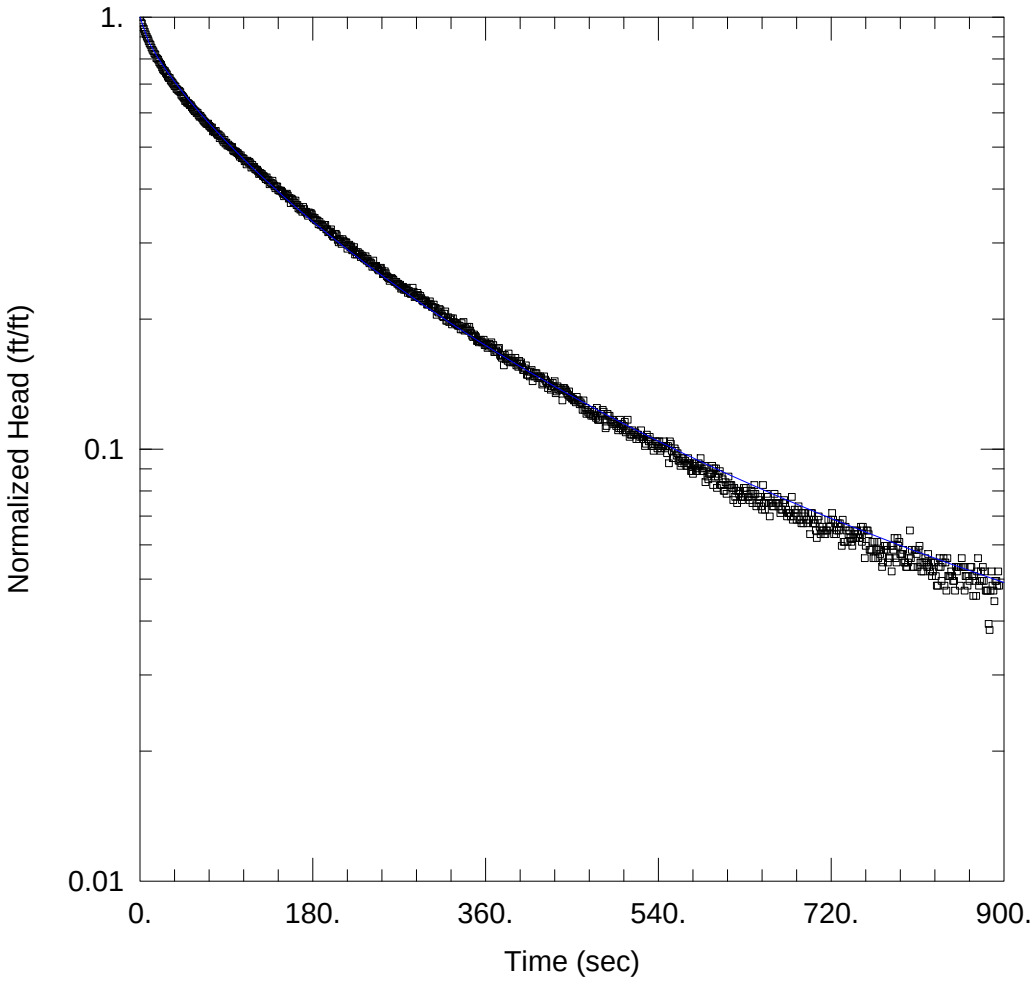
Saturated Thickness: 17. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-51)

Initial Displacement: 0.787 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.41 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 0.8569 ft/day
Solution Method: Bouwer-Rice
y0 = 0.7813 ft



MW-13-51 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-51
Test Date: 12/17/13

AQUIFER DATA

Saturated Thickness: 17. ft

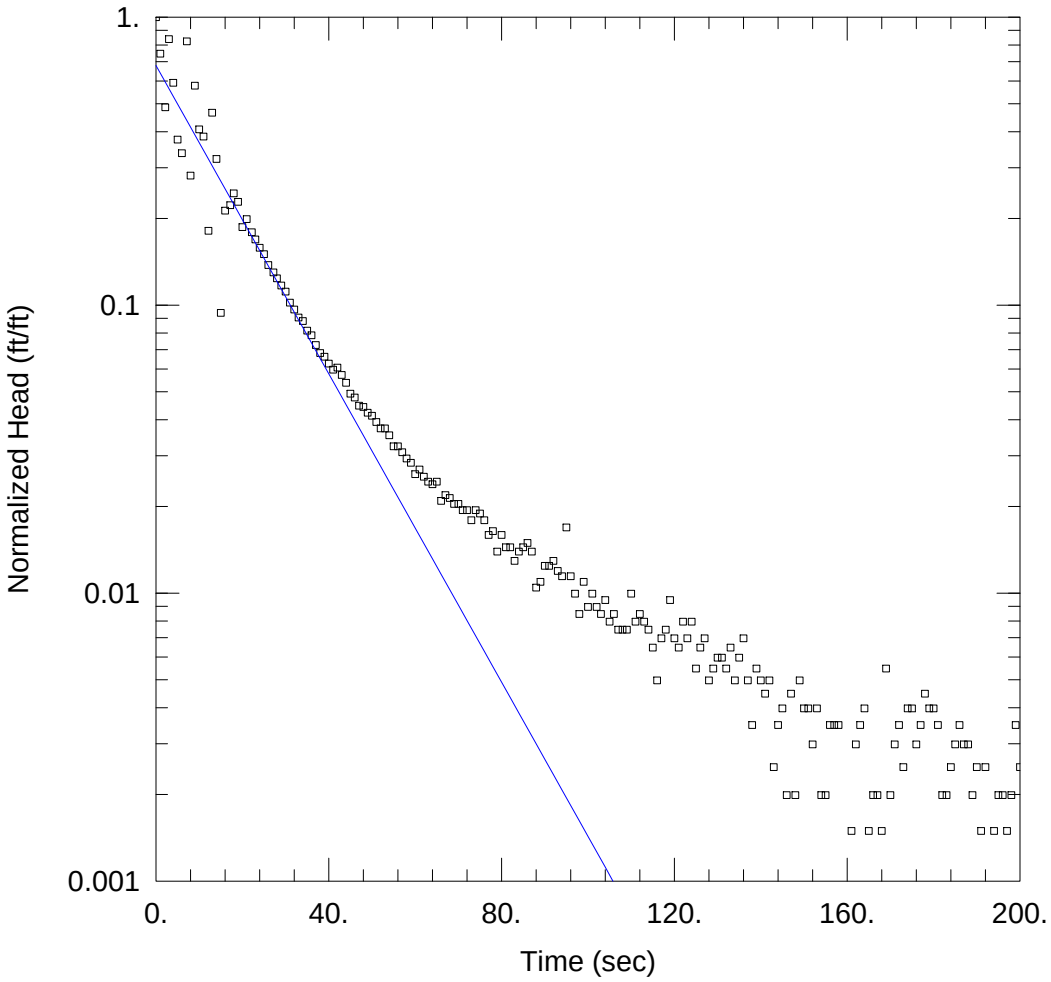
WELL DATA (MW-13-51)

Initial Displacement: 0.787 ft
Total Well Penetration Depth: 17. ft
Casing Radius: 0.083 ft
Static Water Column Height: 16.41 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 0.4268 ft/day
Kz/Kr = 1.
Ss = 0.0001928 ft^{-1}



MW-13-52 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-52
Test Date: 12/17/13

AQUIFER DATA

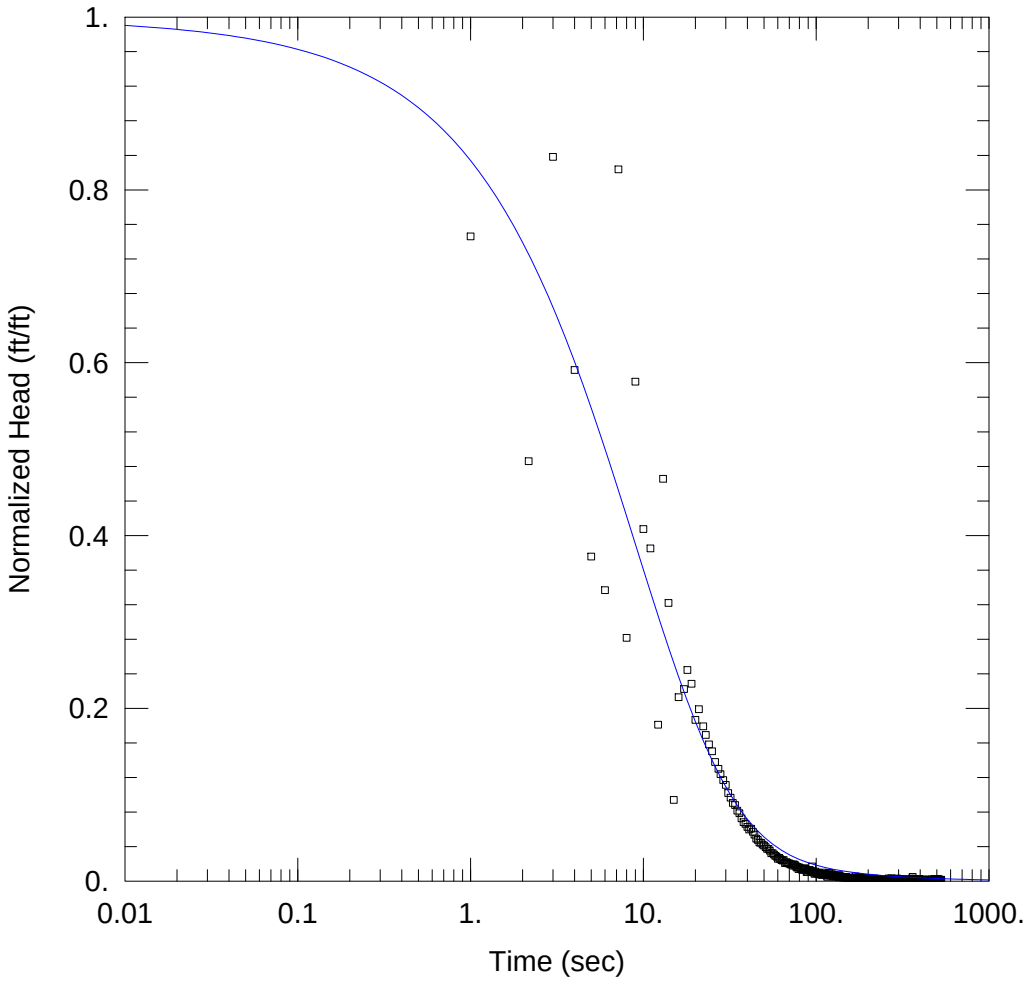
Saturated Thickness: 14. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-52)

Initial Displacement: 2.01 ft
Total Well Penetration Depth: 12. ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.4 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 4.691 ft/day
Solution Method: Bouwer-Rice
y0 = 1.365 ft



MW-13-52 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-52
Test Date: 12/17/13

AQUIFER DATA

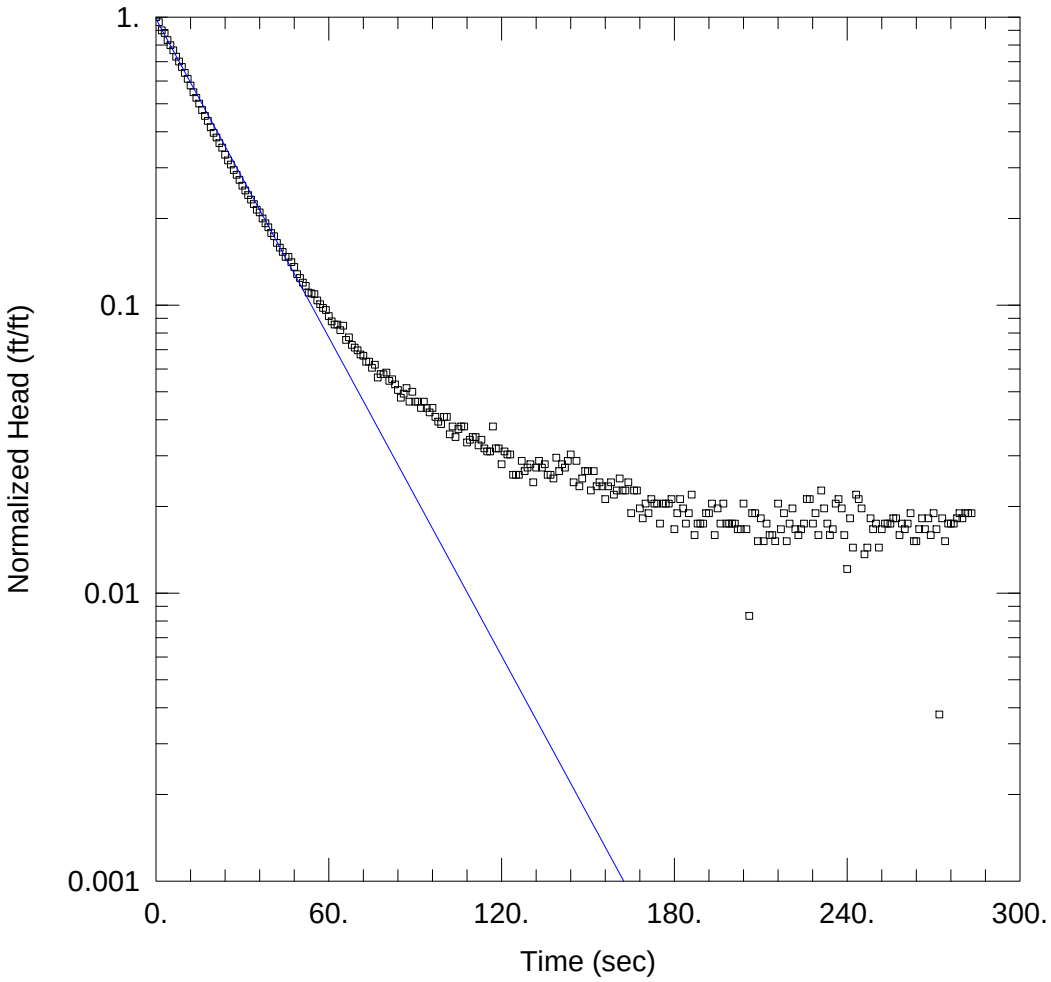
Saturated Thickness: 14. ft

WELL DATA (MW-13-52)

Initial Displacement: 2.01 ft
Total Well Penetration Depth: 12. ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.4 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 7.316 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 0.0001151 ft^{-1}



MW-13-52 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-52
Test Date: 12/17/13

AQUIFER DATA

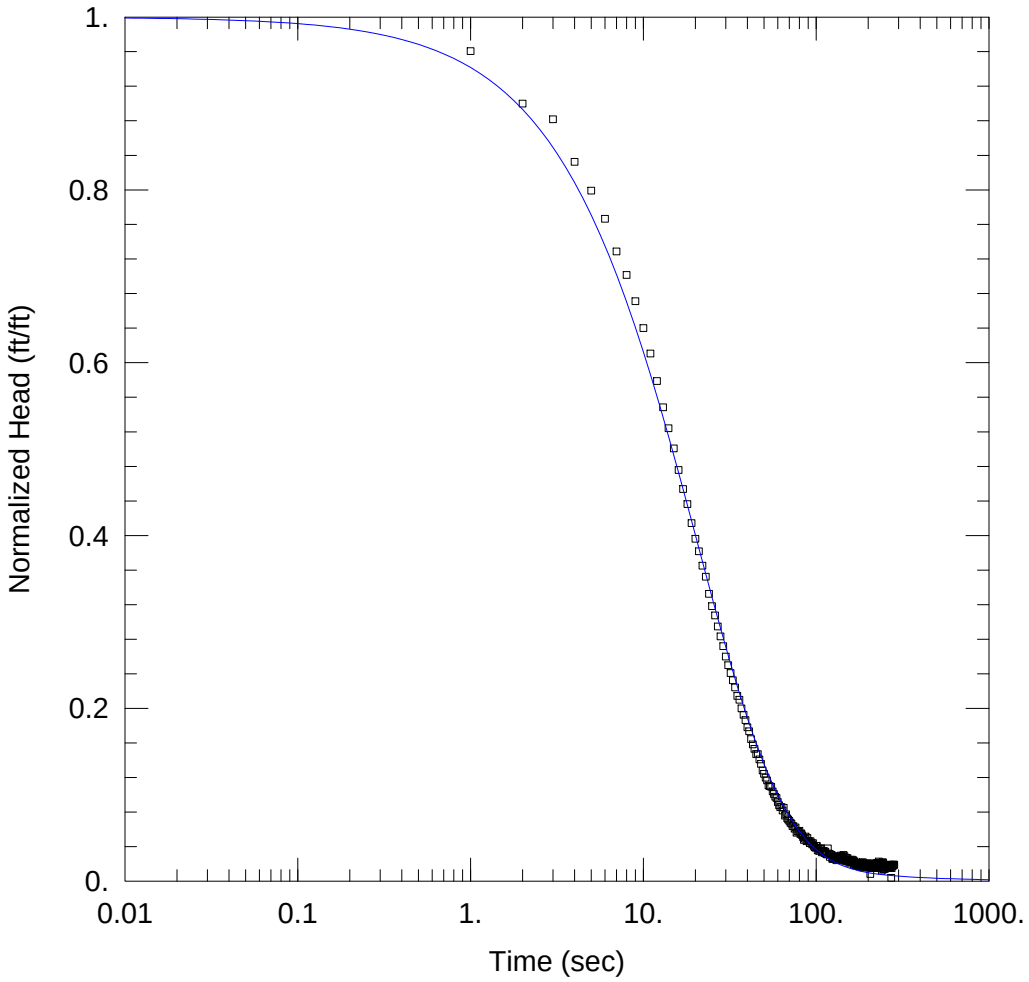
Saturated Thickness: 14. ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-52)

Initial Displacement: 1.32 ft
Total Well Penetration Depth: 12. ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.4 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
K = 3.231 ft/day
Solution Method: Bouwer-Rice
y0 = 1.302 ft



MW-13-52 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-52
Test Date: 12/17/13

AQUIFER DATA

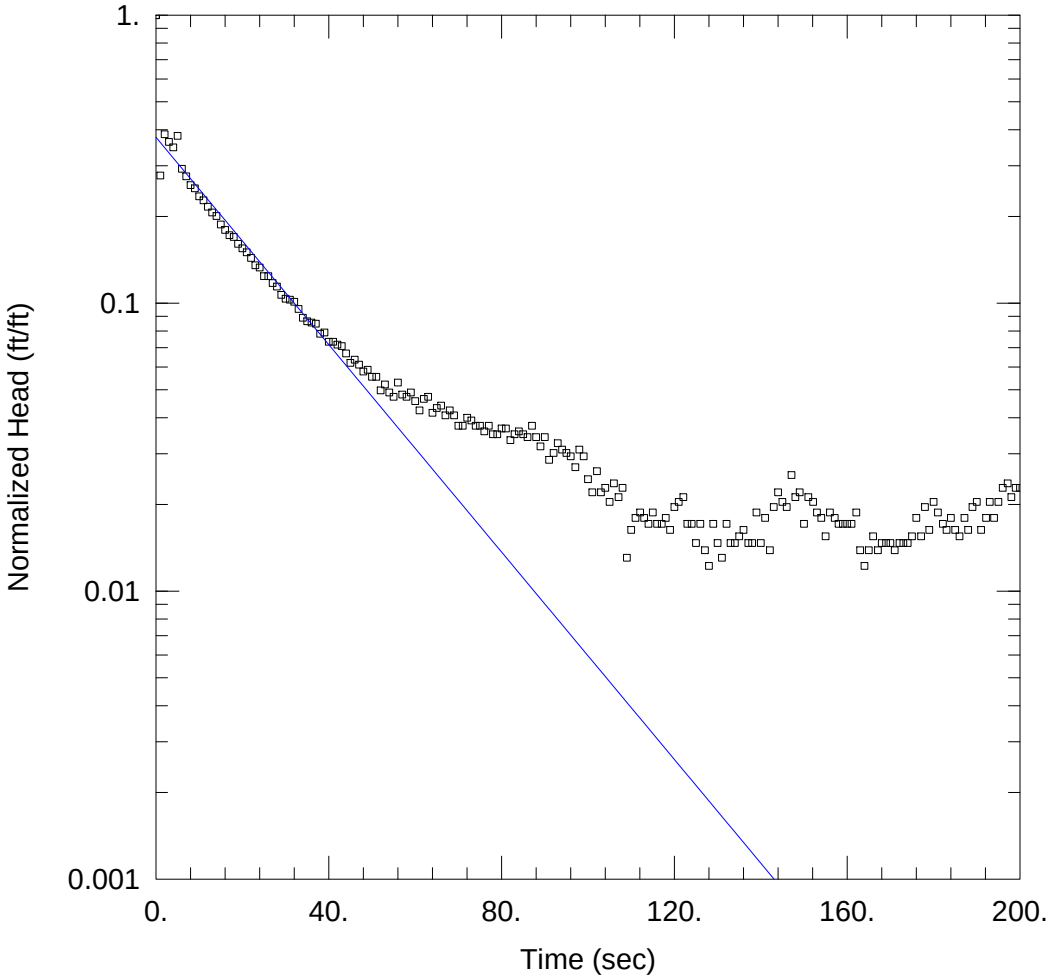
Saturated Thickness: 14. ft

WELL DATA (MW-13-52)

Initial Displacement: 1.32 ft
Total Well Penetration Depth: 12. ft
Casing Radius: 0.083 ft
Static Water Column Height: 10.4 ft
Screen Length: 10. ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined
Kr = 6.91 ft/day
Kz/Kr = 1.
Solution Method: KGS Model
Ss = 7.363E-8 ft^{-1}



MW-13-53 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-53
Test Date: 12/17/13

AQUIFER DATA

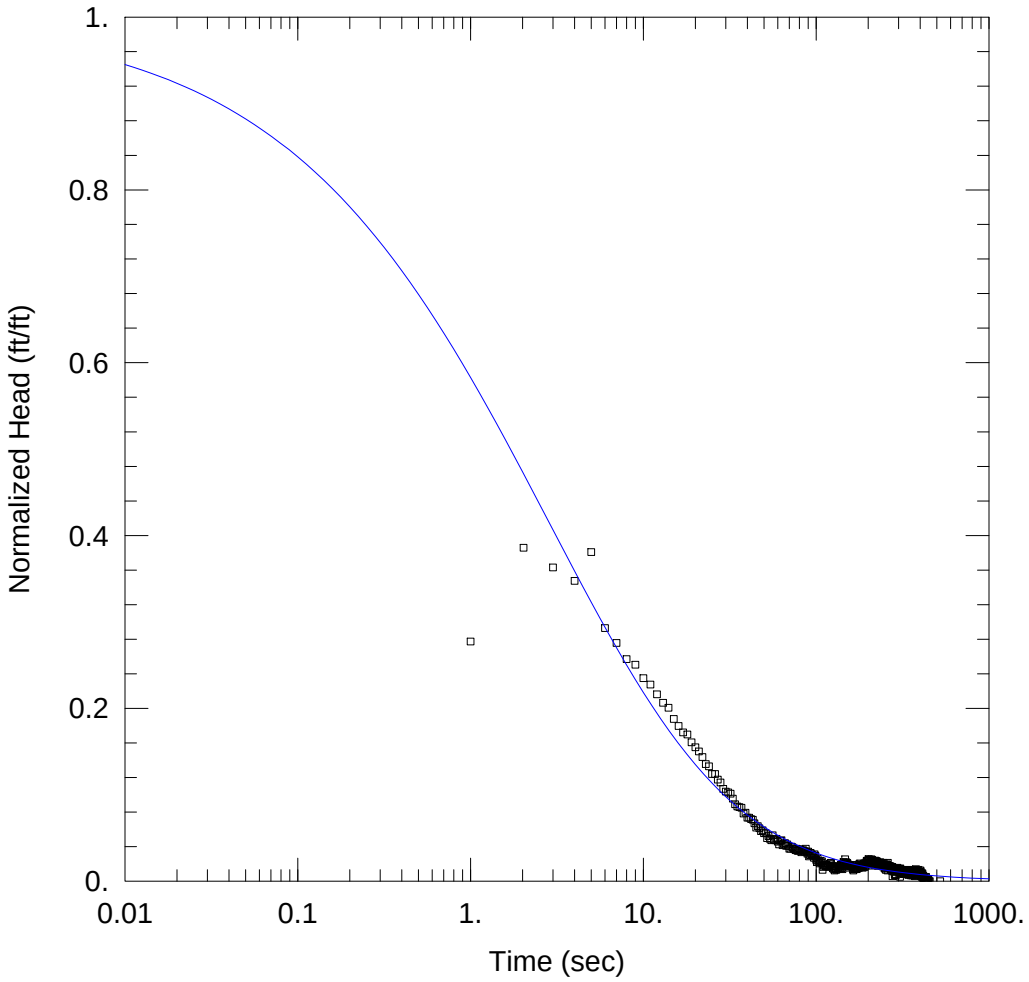
Saturated Thickness: 8.08 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-53)

Initial Displacement: 1.226 ft
Total Well Penetration Depth: 8.08 ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.22 ft
Screen Length: 8.08 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 3.872 ft/day
Solution Method: Bouwer-Rice
y0 = 0.4617 ft



MW-13-53 SLUG-IN

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-53
Test Date: 12/17/13

AQUIFER DATA

Saturated Thickness: 8.08 ft

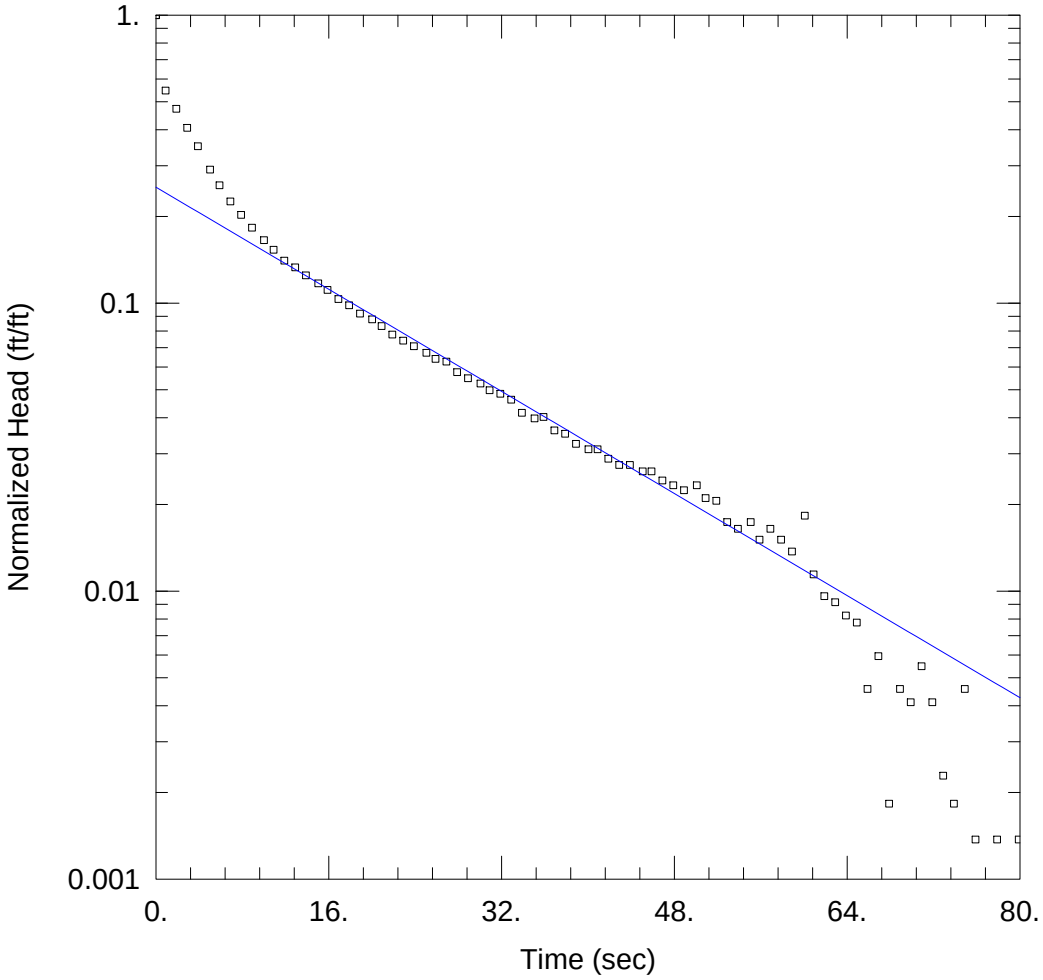
WELL DATA (MW-13-53)

Initial Displacement: 1.226 ft
Total Well Penetration Depth: 8.08 ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.22 ft
Screen Length: 8.08 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 4.692 ft/day
Kz/Kr = 1.
Ss = 0.01238 ft^{-1}



MW-13-53 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-53
Test Date: 12/17/13

AQUIFER DATA

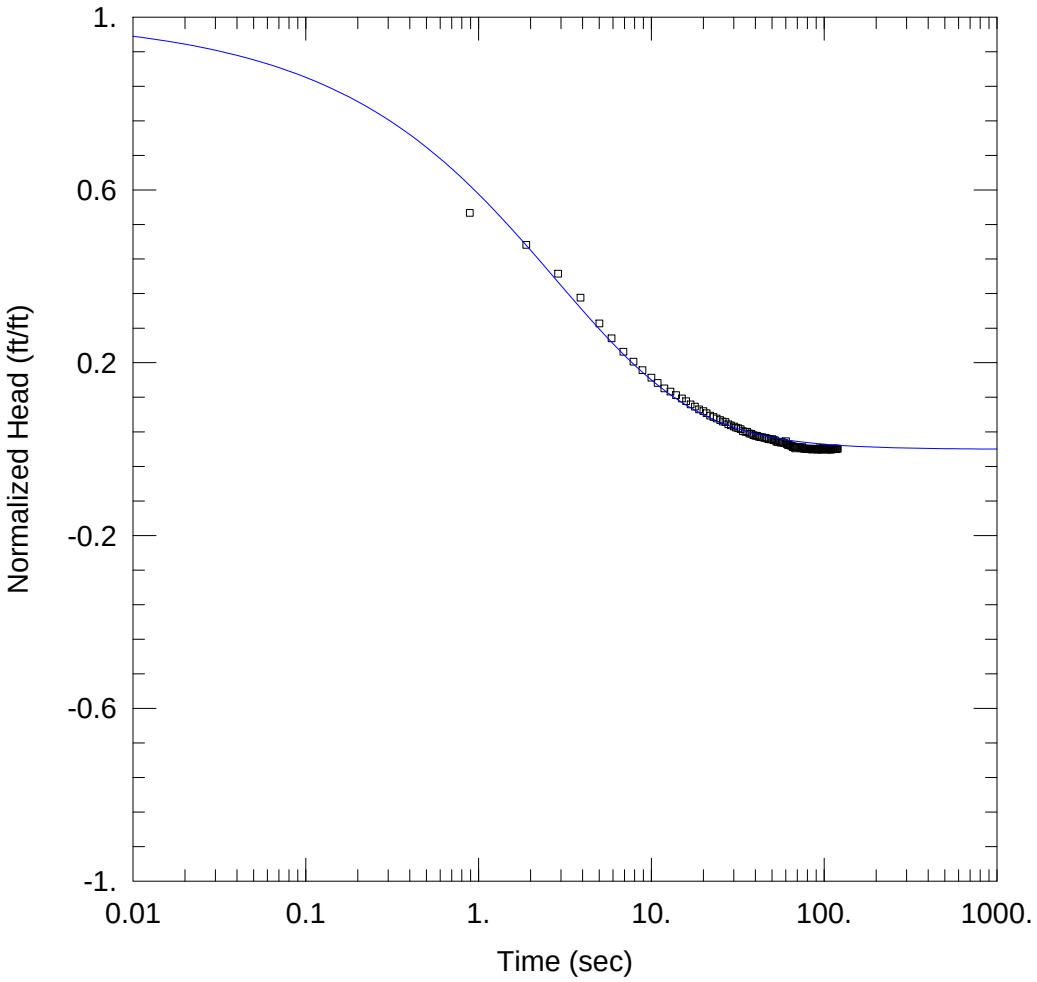
Saturated Thickness: 8.08 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-13-53)

Initial Displacement: 2.187 ft
Total Well Penetration Depth: 8.08 ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.22 ft
Screen Length: 8.08 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
K = 4.765 ft/day
Solution Method: Bouwer-Rice
y0 = 0.5526 ft



MW-13-53 SLUG-OUT

PROJECT INFORMATION

Company: ARCADIS
Client: RACER Trust
Location: Lansing
Test Well: MW-13-53
Test Date: 12/17/13

AQUIFER DATA

Saturated Thickness: 8.08 ft

WELL DATA (MW-13-53)

Initial Displacement: 2.187 ft
Total Well Penetration Depth: 8.08 ft
Casing Radius: 0.083 ft
Static Water Column Height: 8.22 ft
Screen Length: 8.08 ft
Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 12.15 ft/day
Kz/Kr = 1.
Ss = 0.002901 ft^{-1}

Appendix F

Background Water Level Study

Summary of Barometric Efficiency Analysis

RACER Trust, Plant 2, Lansing, Michigan

Introduction

Groundwater levels for site wells MW-12-05, MW-12-06, P2-SB-06, and P2-SB-20 were recorded using In-Situ, Inc. Rugged Troll 100® absolute pressure transducers for a period of approximately one week, from October 17, 2012, to October 24, 2012. The objective of this monitoring is to identify and compare potential influences from pumping, precipitation, and water level trend within the shallow water-table aquifer and the sandstone bedrock aquifer. This technical memorandum summarizes the techniques used to process the raw water level data, evaluate and remove barometric pressure effects on well water levels, and includes an analysis and interpretation of measured site water levels.

Fluctuations in atmospheric pressure are known to cause measurable changes in water levels measured within a monitoring well. This is related to the differential loading of atmospheric pressure on water levels within the well versus water levels within the aquifer. This differential pressure can cause water to flow into or out of a well, depressing or raising the well water levels with respect to actual water levels in the aquifer. A full discussion of the mechanisms of barometric pressure effects on water levels in wells penetrating confined and unconfined aquifers is available in Price (2009).

Data Processing and Evaluation/Removal of Barometric Effects

Initial processing of raw transducer data consisted of the conversion of measured absolute pressures to gauge pressures by subtracting the barometric pressure measured by an on-site barometric pressure transducer. Barometric effects on well water levels are most commonly described in terms of barometric efficiency, which is a simple ratio of the water level response (negative change in head) to a step change in barometric pressure, or by the Barometric Response Function (BRF). The BRF describes the average, time-varying behavior of well water levels due to changes in barometric pressure over a set length of time. The theoretical BRF for a specific observation well can vary between 0 and 1 and is based on the physical properties of the aquifer and well construction details. The BRF is constant for a specific well given consistent conditions within the aquifer.

The BRFs for Site water levels were calculated using the *KGS Barometric Response Function Software* (Bohling et. al, 2011). This software generates the BRF for a selection of paired water level data and barometric pressure readings. The BRF for each monitoring well was interpreted based on the conceptual models presented in Rasmussen and Crawford (1997). Site water levels were then corrected for barometric pressure effects using the calculated BRFs.

Figure 1 presents the original water levels (gage pressures: total water level – barometric pressure) measured at Site wells. Water levels for each well are offset in order to present the four water level series on one chart; the scale is accurate for each well, but the series order does not reflect the relative positioning of groundwater elevations for these wells.. As shown on Figure 1, water levels at MW-12-05 and MW-12-06 mirror the barometric pressure series, indicating strong well head responses to barometric pressure changes. Figure 2 presents the barometric response functions calculated for the water levels

measured at each monitoring well. The corrected water levels are shown in Figure 3, alongside precipitation totals measured in the vicinity of the Site.

Water levels within wells MW-12-05 and MW-12-06 show significant levels of barometric response consistent with confined conditions and/or a deep water table, and a competent aquifer matrix material (denoted by a barometric response function that is predominantly horizontal). The increasing barometric response function shown for MW-12-05 at early lag times suggests that conditions in this well are consistent with the borehole storage model described in Rasmussen and Crawford (1997).

Well P2-SB-20 exhibits a barometric response consistent with a shallow unconfined system, which is characterized by an initial high level of barometric response that decreases at longer lag times. The BRF for well P2-SB-06 is consistent with an unconfined aquifer model as well and comparison of the raw water levels with the corrected water levels indicates that the application of the calculated BRF for this well removes noise associated with the barometric pressure.

Interpretation of Site Water Levels

Analysis of site water levels was performed using observed patterns of water levels, measured groundwater elevations, and barometric response characteristics.

Boring logs for each of the four wells analyzed indicates that wells P2-SB-06 and P2-SB-20 are completed within a shallow sandy zone, which is underlain by a thick till layer. Wells MW-12-05 and MW-12-06 are screened within the sandstone bedrock, beneath the extensive clay confining unit. Calculated BRFs for wells MW-12-05, MW-12-06, and P2-SB-20 are consistent with the known geologic setting of the wells, and indicate a significant difference in barometric response among the deep wells and the shallow wells.

Observed water levels in wells MW-12-05 and MW-12-06 are relatively linear. Water levels at MW-12-05 show a slight increasing trend for the period of record and water levels in MW-12-06 show very little change during this time. No significant fluctuations or measureable drawdown was observed due to municipal pumping at these locations.

Water levels for shallow wells P2-SB-06 and P2-SB-20 exhibit multiple slope changes which indicate responses to precipitation and/or other external sources. The pattern observed in water levels at P2-SB-20, with sharp increases in water level followed by periods of gradual attenuation, reflects responses to precipitation (Figure 3). Based on this data, it appears P2-SB-20 acts as a sump – rapidly filling with water during rain events and then slowly feeding this water into the perched zone aquifer over time.

Water levels at P2-SB-06 exhibit several small perturbations, but the source of these features is not readily discernible from available data. Water levels in this well also show a general increase for the period of record due to gradual recharge related to the seasonal increase in precipitation. No obvious similarities between the water level records for the two shallow wells are observed, and the relative groundwater elevation between the two wells is separated by almost 10 feet suggesting they are screened within different perched groundwater units. This observation is consistent with the conceptual site model describing the perched zone as heavily interbedded layers of sand, silt and clay.

Estimated groundwater elevations from gauging of wells prior to transducer deployment are presented in Table 1. It is clear from measured depth-to-water that heads within the perched zone and bedrock aquifer are significantly dissimilar, with head differences on the order of 60 to 70 feet. Comparison of manual depth-to-water measurements to boring log data for bedrock wells MW-12-05 and MW-12-06 indicate that water levels at these wells are below the bottom of the clay confining unit with an unsaturated layer of sand between the water table and the bottom of the confining unit indicating the bedrock aquifer is technically unconfined. The layer of unsaturated material present between the clay confining unit and the underlying bedrock aquifer further supports the hydraulic separation of the shallow perched zone from the regional bedrock aquifer.

Conclusions

Analysis of recorded water levels at wells MW-12-05, MW-12-06, P2-SB-06, and P2-SB-20 indicates different characteristics for the shallow perched zones and deep bedrock aquifer at the Site with respect to barometric response, water level trends, and estimated groundwater elevation. No evidence for hydraulic connection between the two units (such as similarity in trends or responses to precipitation or pumping) was identified from the water level trends; and as stated above, the significant head difference and the presence of unsaturated material between the two aquifers strongly suggests that these units are hydraulically isolated. Characteristic drawdown responses related to municipal pumping were not observed in either of the deep well water level records.

References

Bohling, G.C.; Jin, W.; and J.J. Butler, Jr; 2011. Kansas Geological Survey Barometric Response Function Software. The Kansas University Geological Survey, Open-file Report No. 2011-10.

Price, M., 2009. Barometric water-level fluctuations and their measurement using vented and non-vented pressure transducers. Quarterly Journal of Engineering Geology and Hydrogeology, 42:245-250.

Rasmussen, T.C. and L.A. Crawford, 1997. Identifying and Removing Barometric Effects in Confined and Unconfined Aquifers, Groundwater, vol. 35, no. 3., pp 502-511.

Table 1 - Estimated Groundwater Elevations, RACER Trust, Plant 2, Lansing, MI

Well ID	Depth-to-Water (ft toc)	Approximate Top of Casing Elevation* (ft amsl)	Groundwater Elevation (ft amsl)
MW-12-05	74.71	865.1	790.4
MW-12-06	74.11	864.5	790.4
P2-SB-06	19.19	865.7	846.5
P2-SB-20	8.5	863.2	854.7

Notes:

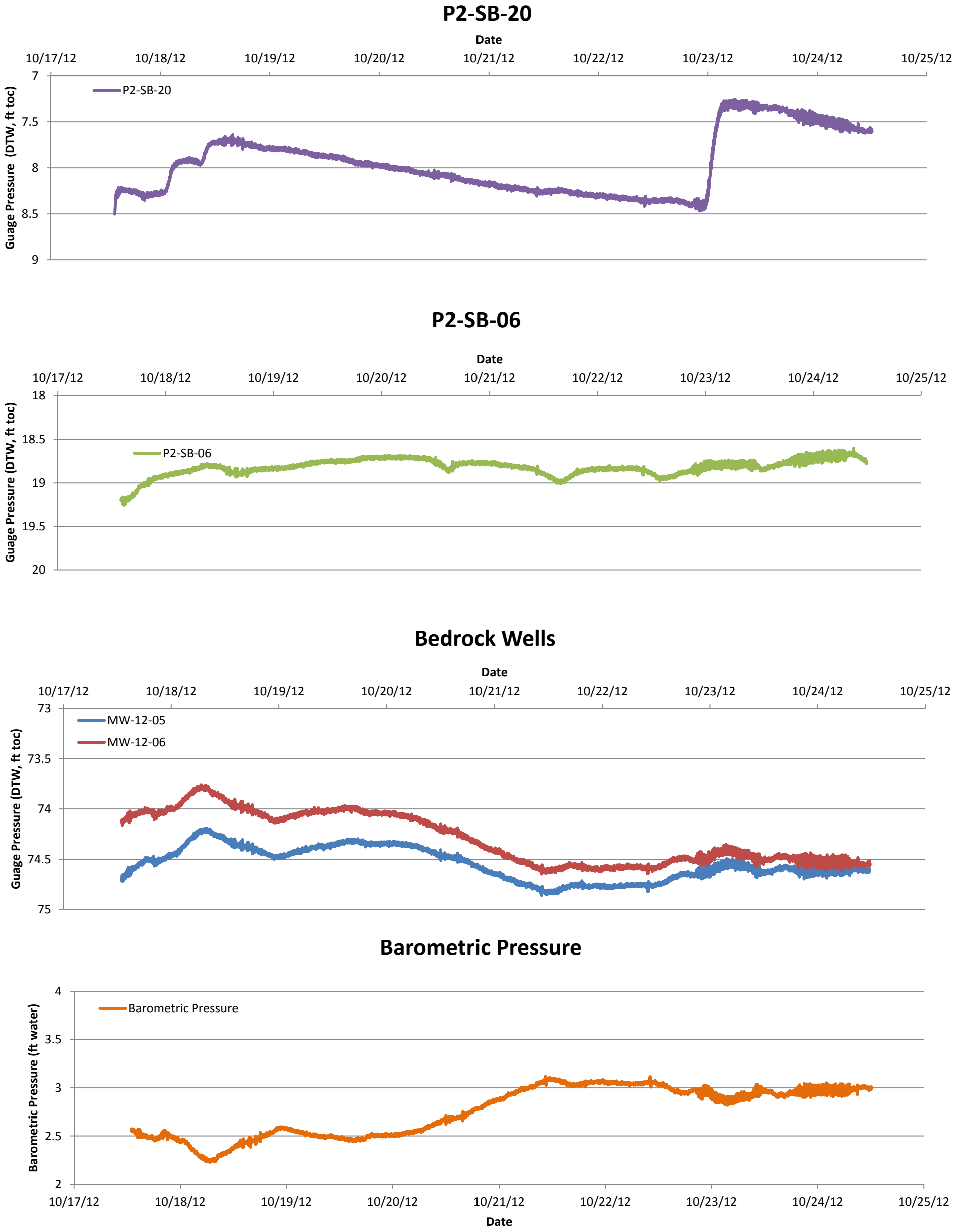
Groundwater elevations should be considered estimates.

* - top of casing elevations based on the digital elevation model plus an estimated stickup.

ft amsl - feet above mean sea level

Figure 1. Measured Depths-to-Water*

RACER Trust, Plant 2, Lansing, MI

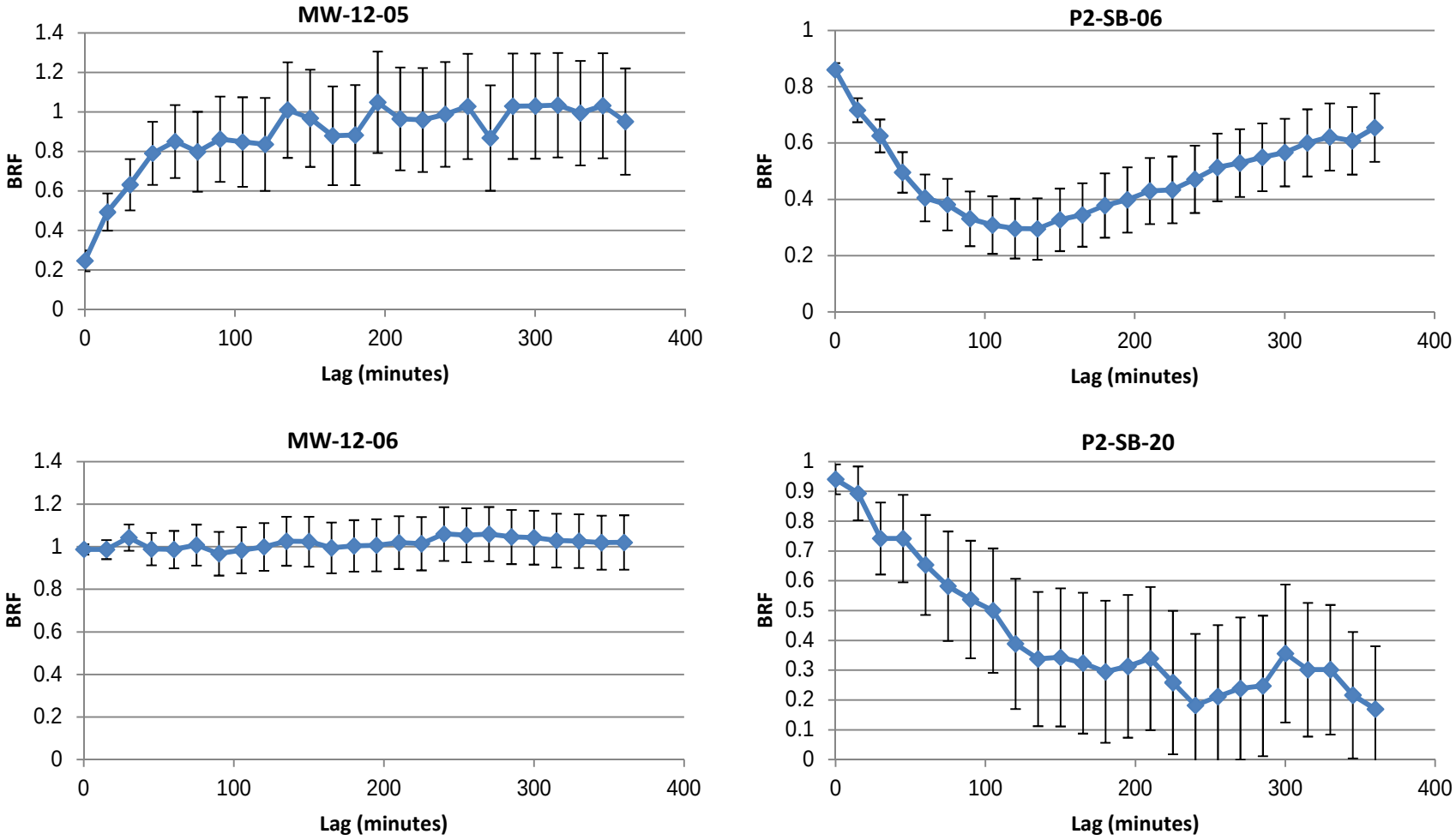


Note:

* - Gauge pressure represents well water levels ,and is calculated by subtracting barometric pressure from measured absolute pressure readings. Water levels are presented in feet of water and coverted to relative depth below grade for reference.

ft toc - feet below top of casing

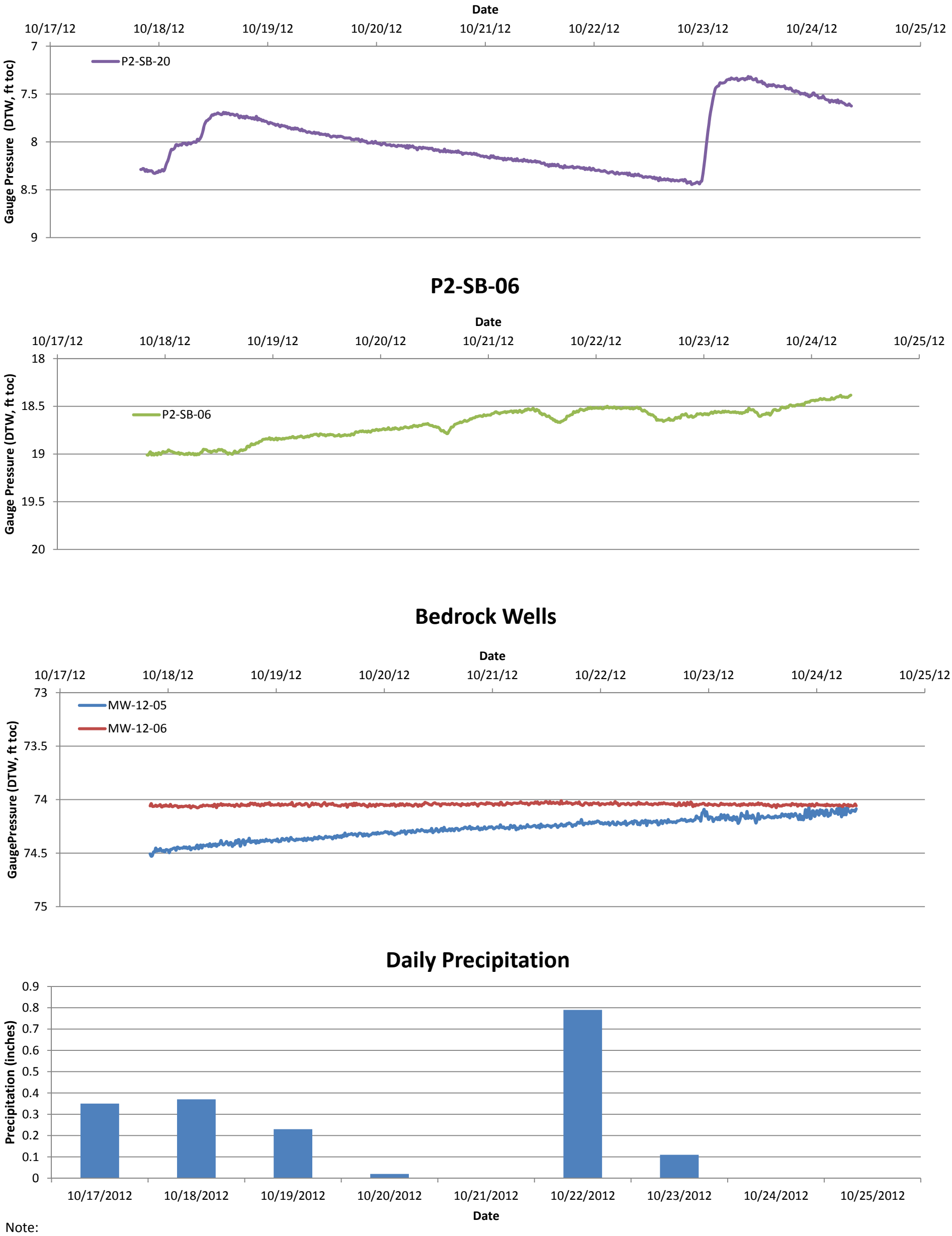
Figure 2. Barometric Response Functions for Site Wells
RACER Trust, Plant 2, Lansing, MI



Note:
Barometric response funcltions (BRF) are calculated from water levels and the barometric data. Each BRF describes the time-dependant response of well levels relative to changes in barometric pressure.
The error bars on each graph represent the standard error from the statistical regression (ordinary least-squares) of water levels and barometric pressure changes at each lag time.

Figure 3. Depths-to-Water with Barometric Effects Removed

RACER Trust, Plant 2, Lansing, MI



Note:

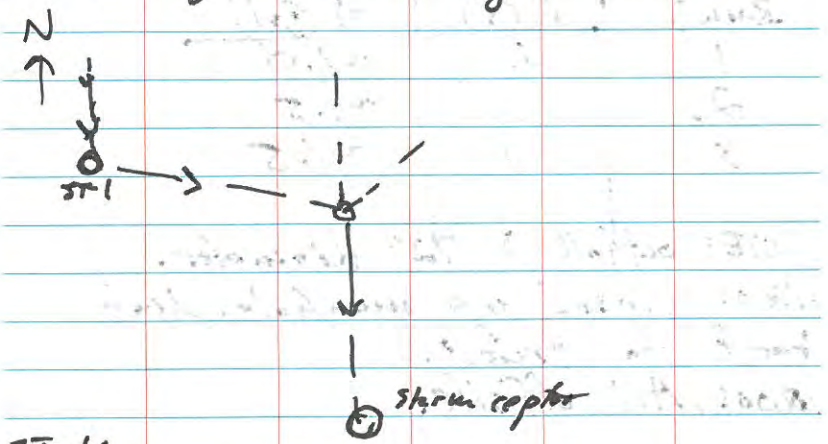
The barometric correction varies by well and is based on the calculated barometric efficiency function.

ft toc - feet below top of casing

Appendix G

Stormwater Dilution Assessment

July 23, 2013 RACER Lansing P6
Purpose: Storm sewer investigation
ARCADES: L. Rogers, P. Bahls
Weather: 70° overcast
0825: All onsite. Mob to south end of plant 6.
0840: Begin measuring sewers.

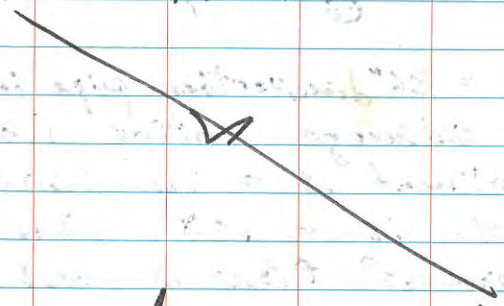


ST-1:
10.5 - 7.7 = 36" diameter pipe in ST-1.
Unable to submerge entire flow bulb. Sediment is ~ .2' thick, water depth is ~ .08'. Visual estimation of flow is less than 1 GPM.
0925: Storm septor approx: 1 GPM
0930: Mob to outfall area.
1000: Unable to use flow meter at

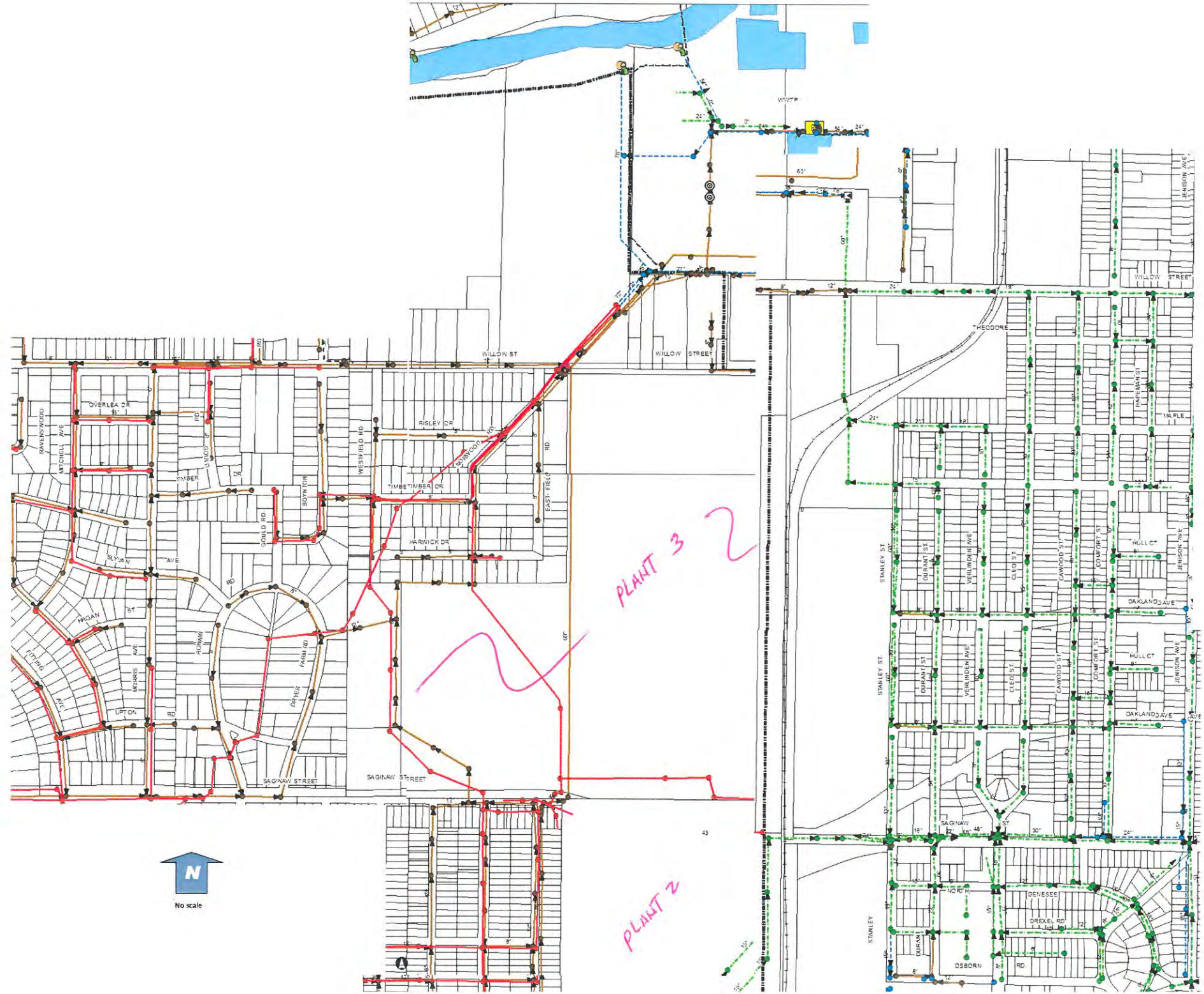
July 23, 2013 Racer P6
sewer before outfall.
1020: Mob to offsite storage to pick up supplies.
1100: Mob back to site. using 5 gallon bucket to estimate flow at outfall. Water depth = ~1"

Run:	T (s)	V (gal)
1	6	~1.0
2	7	~1.5
3	7	~1.5

NOTE: outfall is 72" diameter.
1120: Close up manhole. Mob back to truck.
1200: All offsite.



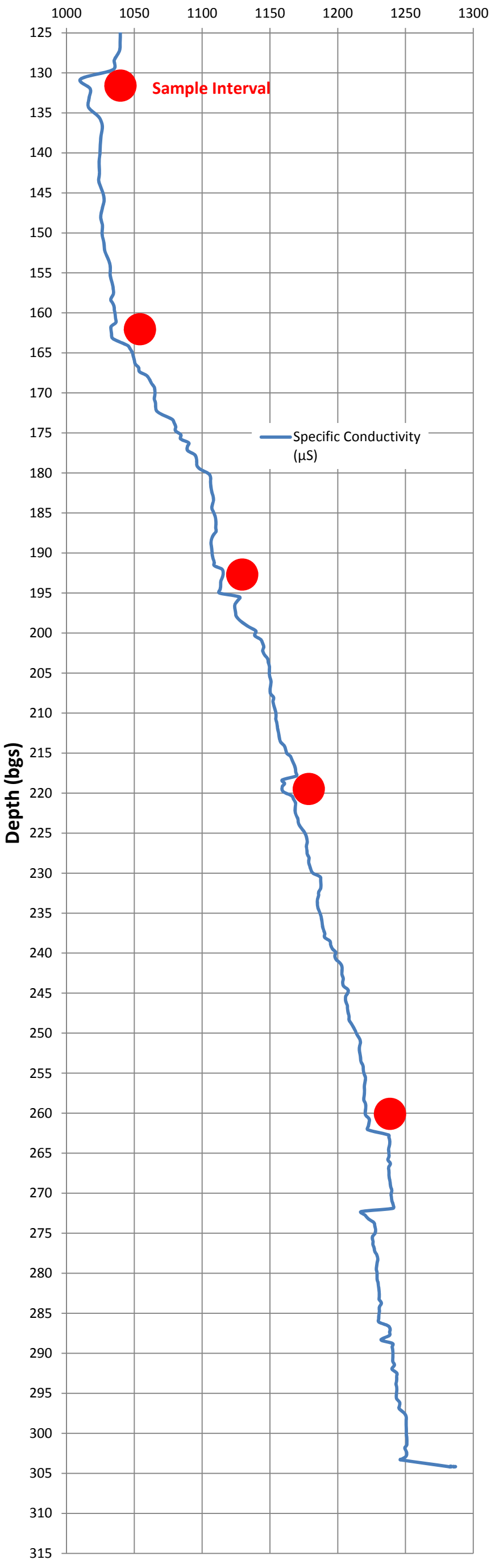
Jance McKeown


WWTP
WILLOW ST
WILLOW STREET
THEODORE
OVERLEA DR
RAVENSWOOD
MITCHELL AVE
TIMBER
DR
RISLEY DR
NORWOOD RD
WESTFIELD RD
BOYNTON
TIMBERTIMBER DR
EAST FIELD RD
HARWICK DR
GOULD RD
SLYMAN AVE
HOGAN
EATING AVE
DEHARIS AVE
DRYER
FARM RD
HORNER
SAGINAW STREET
PLANT 3
PLANT 2
N
No scale
MAPLE
HAPEMAN ST
JENISON AVE
HULL CT
OAKLAND AVE
STANLEY ST
DURANT ST
VERLINDEN AVE
CLEGI ST
CAWOOD ST
COMFORT ST
SAGINAW ST
GENESEE
DREXEL RD
OSBORN
STANLEY

Appendix H

BWL #10-10 Electrical Conductivity Log

BWL Well 10-10
Specific Conductivity (µS)



BWL Well 10-10
Temperature (°C)